

Public Utilities

FORTNIGHTLY



Volume LI No. 5

February 26, 1953

MODERN PROOF OF THE PRESENT VALUE RATE BASE

By Jay Samuel Hartt

« »

A Bumper Crop of Gas Compressor Stations?

By Larston D. Farrar

« »

Area Development Program for Utilities

By Daniel L. Diehl

« »

The Place of Hydro Power Today

By John P. Callahan

Op. 261

ABRAMS AERIAL SURVEY CORPORATION

LANSING 1, MICHIGAN



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Public Utilities

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VOLUME LI

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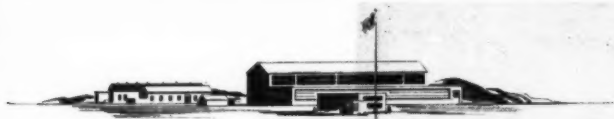
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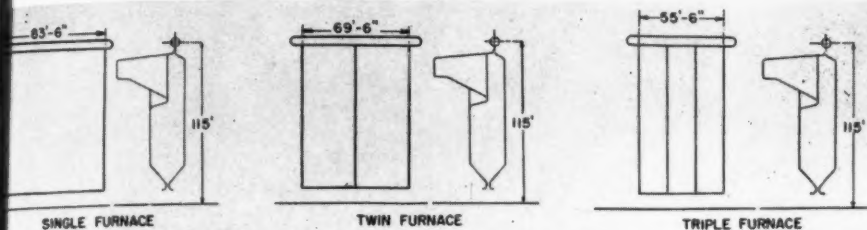
A practical, long-proved solution to rising construction costs may be found in the B&W Divided-Furnace Boiler. Whether it is a problem of conserving height, width, or both—especially for units with large heat input—B&W's Divided-Furnace design offers remarkable economies. The sketches on the opposite page show typical savings in space for twin-furnace and triple-furnace construction as compared with single-furnace construction.

A furnace division wall receives heat from both sides and therefore must be assured an adequate

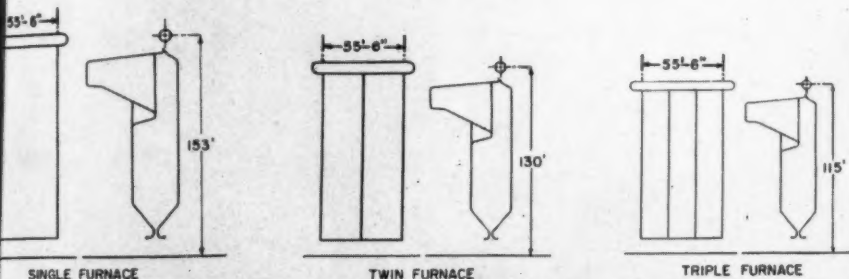
supply of water. With the B&W Cyclone-Steam Separator, circulation in division walls of B&W boilers has always been more than ample—as proved by long-term central station operation at boiler design pressures as high as 2650 psi. Many years of experience stand behind B&W's Divided-Furnace construction with all types of large units—Radiant, Stirling, and Open-Pass. Over 75 B&W Divided-Furnace Boilers are in operation—many for over 10 years—and more than 80 units are under construction, for the following electric utilities:

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EFFECT OF DIVISION WALLS ON BOILER WIDTH—KEEPING HEIGHT CONSTANT



EFFECT OF DIVISION WALLS ON BOILER HEIGHT—KEEPING WIDTH CONSTANT

FURNACE

Division wall furnace construction is used in combination with other significant achievements of B&W Research and Development, including the Cyclone Furnace, Pressure-Firing, Gas Recirculation, and improved alloys for high steam temperatures. Widely accepted throughout the power industry, these modern B&W advances are making major contributions to more economical and reliable steam generation.

B&W's continuing program of progressive research combined with its broad experience in designing and building boilers with the highest capacities in existing pressure-temperature ranges, assure you of the most efficient and economical solutions to your specific steam generation problems.

ADVANTAGES OF DIVIDED FURNACE CONSTRUCTION

- Provides greater cooling area without increasing furnace volume
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- Lowers furnace construction costs
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Triple furnace boilers for 1 boiler — 1 turbine units of over 200,000 KW capacity are now being constructed



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Pages with the Editors

EVEN while the farmers and the Agriculture Department worry over declining prices on the food front, there is some evidence that the regulatory lag in utility rate cases is beginning to catch up with inflation. Within the past few weeks the highest courts of three states have ruled that their respective state commissions must take into consideration present-day inflated cost conditions in fixing rates. Thus, three states, Maine, Maryland, and Illinois now appear in the column of states which require some consideration of reproduction cost, in determining the rate base.

It so happens that all three of these cases involved telephone companies which are operating subsidiaries of the Bell system. So, technically, the leadership of the Federal Power Commission in insisting on rigid adherence to original cost less depreciation is not involved. But actually the coincidence of these three cases would seem to mark some kind of a twist, if not an actual trend, away from the net investment standard to which the FPC has been rallying state commissions so resolutely for a good many years.



© Chase

LARSTON D. FARRAR

FEB. 26, 1953



JAY SAMUEL HARTT

MAYBE it is just temporary. And maybe there are some utility companies which are not entirely happy over even the possibility of a return to the old reproduction cost "guessing games" which the valuation engineers of the late twenties and early thirties used to engage in, as rate case experts. Natural gas pipeline companies, for example, with their relatively high percentage of bonded investment, would probably think hard before getting too far away from some kind of a stout line of evidence linking their properties to a cost standard, especially during a confused and unsettled economic price period through which we seem to be passing.

BUT the long-range history of the American dollar, like that of the British pound and the French franc, and even the old Roman denarius, has been one of declining purchasing power. Over the immediate short term, we may have struck a plateau or even temporary dip. But as the late Bert Williams would lament: "The 5-cent beer is gone forever." Anybody who thinks otherwise is more than an optimist; he is a sentimental dreamer of bygone years.



What goes on at this Round Table?

● They could be exchanging ideas on new financing . . . discussing the cost of new money . . . hearing an expert appraisal of long-term trends for utilities.

Those present, in addition to the public utility executives, include experts from investment banking institutions, insurance companies, rating agencies—and from numerous other types of financial organizations.

Yes, this is a typical Public Utility

“Round Table” at the Irving. Last year alone, 145 representatives from 83 utility companies attended these sessions.

These “Round Tables,” now going into their sixth year, are one of the ways we seek to serve the public utility industry. As specialists in this field, we are constantly on the lookout for ways to be of practical help. If your company has an unusual problem, that’s the kind of challenge we welcome.

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MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

ALL of which lends special point to methods and techniques for proving present-day rate base value without resorting to the aforesaid "guessing games." Our leading article in this issue tells us a simple way to trend electric utility costs through price indices. Not only does the author make a presentation of modern technique in proving the present value rate base, but he gives reasons for its use at this time. He answers claims made by critics of the present value rate base that the same utility property would not be reproduced, under modern conditions, and that new equipment would be more effective. By using a calculated deduction for obsolescence, the author feels he has met these objections.

THE author of this article is the well-known consulting engineer of Chicago, JAY SAMUEL HARTT, a veteran of many valuation cases for regulatory, taxation, or other purposes since the end of World War I. A graduate of Michigan State College (BS in electrical engineering, '15), MR. HARTT has been in the valuation business for all kinds of utilities and a good many nonutility industries and governmental agencies. He has prepared evidence and given testimony before courts and commissions in more than 200 rate cases. Need we say more of his qualifications? Not to most of our readers, we are sure. He began his own consulting practice in 1924, rendering various classes of service.



JOHN P. CALLAHAN

FEB. 26, 1953

"A BUMPER CROP OF GAS COMPRESSOR STATIONS?" is the name of the article beginning on page 275. An important part of the gas industry's dynamic postwar growth is represented in compressor stations and related facilities. Anyone who wants to know how much emphasis natural gas transmission companies are placing on the compressor station, its employee morale, and other collateral circumstances, will get the information in this article by LARSTON D. FARRAR, Washington writer of business articles. Expansion of facilities to "push" gas is a saga of terrific changes and improvements in natural pipeline growth all over the nation.

* * * *

DANIEL L. DIEHL, whose article on "Area Development Program for Utilities" begins on page 286, is manager of such a program for the Pennsylvania Power & Light Company of Allentown, Pennsylvania. He has had valuable assistance, not only from local city and town officials and industry in his company's service areas, but also from the Pennsylvania State College and its business-minded staff of economists. The college was and is still headed by Dr. Milton Eisenhower, brother of our nation's President. As a result of this program, DIEHL is a consultant on business and community problems, and in some cases has advised potential customers for electricity where to build their factories in territory served by his own company, but even elsewhere.

* * * *

JOHN P. CALLAHAN, of *The New York Times*, has made a brief study of the probable place of the hydro plant in the future of electric service, in the light of both political developments and atomic energy. His article, entitled "The Place of Hydro Power Today," begins on page 294.

THE next number of this magazine will be out March 12th.



The Editors



Illustrated here is the 2-station counter

NEW Sectional Customer Service Counter for Cashiering or Bookkeeping

This new Remington Rand Service Counter has all the advantages you've been looking for. Just check this list and see for yourself:

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Coming IN THE NEXT ISSUE



UTILITY RATES MUST RECOGNIZE DOLLAR DEPRECIATION

Is public utility regulation in danger of being ruined and the public utility enterprises wrecked by the long-range erosive process caused by strict application of cost standards? That is a pretty ominous question, but the authors of this important article give us an equally ominous answer. And since they are both past presidents of the American Accounting Association, they speak with authority when they warn us "that the application of accounting formulas in the determination of supposedly fair rates of return on investment is wholly inappropriate to even its avowed purpose, in periods when the value of the dollar has rapidly and substantially depreciated." You will not want to miss reading this important feature under the double authorship of Professor William A. Paton of the University of Michigan and Howard C. Greer, vice president of the Monon Railroad.

TV AND THE ELECTRIC INDUSTRY

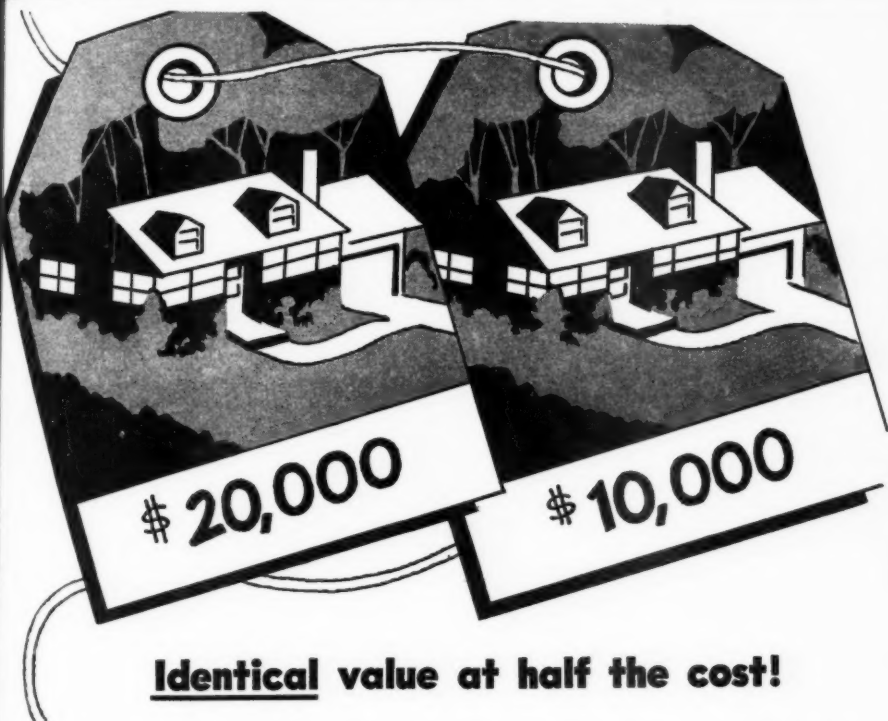
We have heard how television is changing the leisure-hour habits of the American family. We have heard about the impact of one kind or another that it is having on child education, adult literature, the publishing business, and so forth. Here is an article by A. Bryan Marvin of the public relations staff of Consolidated Edison Company of New York, which takes up the impact of television on the electric industry. Is television a good load builder; is it likely to result in excessive plant demand? You will find some answers in Mr. Marvin's entertaining account and you may find them anti-climactic.

UTILITY COMPANY SUPPLY FOR ATOMIC ENERGY DEVELOPMENT

How often have we heard that some projects involving electric developments are so big that private enterprise cannot be expected to handle them? The inference is that only the government is big enough to follow through. Here is a story about one of the biggest development projects of this kind in the postwar history of this country. It involves the building of an electric power supply plant for the Atomic Energy Commission's billion-dollar uranium diffusion project near Portsmouth, Ohio. **The New York Times** called it "one of the most comprehensive undertakings in the power industry's history." Yet it is being carried out under a contract banding together 15 private utilities. These companies are pledged to furnish, according to George W. Keith, Cincinnati author of business articles, the greatest single bloc of power supply ever to be provided by any company or group of companies.



Also . . . *Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.*



Identical value at half the cost!

It isn't often that you can get an identical value at half the cost.

But here is such an instance:

When a bill analysis is made in your offices, it's really a big project that may take weeks and weeks to complete. You may have to acquire and train a special clerical force. The overhead costs, too, are correspondingly big.

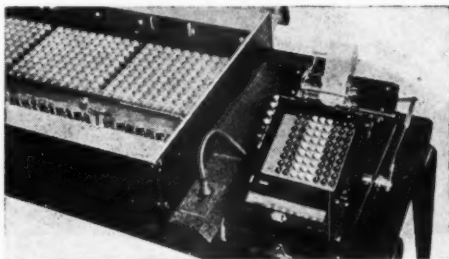
On the other hand, your costs drop to about half when you turn over the task to us and the work is done on high-speed Bill Frequency Analyzer machines which are designed especially for the purpose.

Your bill analysis can be turned out much faster than you may think. Send for the interesting, helpful booklet which tells more

about this efficient method of compiling bill analyses.

P.S. If you use punched cards for billing, we are also equipped to make your analyses from them.

Saves 50% in time and money!



This Bill Frequency Analyzer—developed especially for utility usage data—automatically classifies and adds in 300 registers—in one step.

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100 Sixth Avenue, New York 13, N. Y.

Remarkable Remarks

"There never was in the world two opinions alike."

—MONTAIGNE

LOUIS B. SELTZER
Editor, The Cleveland Press.

MILTON S. EISENHOWER
*President, Pennsylvania
State College.*

JACK GARRETT SCOTT
*Former Under Secretary for
Transportation, Commerce
Department.*

JOHN L. COLLYER
*President, B. F. Goodrich
Company.*

ARTHUR R. KAISER
*General manager, tax department,
Sears, Roebuck & Co.*

DECHARD A. HULCY
President, Lone Star Gas Company.

HOLGAR J. JOHNSON
*President, The Institute of Life
Insurance.*

CRAWFORD H. GREENEWALT
*President, E. I. du Pont de
Nemours & Company.*

"The results of the recent election have magnified rather than lessened the public relations responsibilities of American business."

"The socialization of medicine would be a fatal step that would lead to the loss of economic freedom, and therefore to the loss of political and personal freedom, too."

"There can be no sound transportation policy established unless it is adequately supported by a thorough, impartial, and complete collection and interpretation of the facts."


"Our long-range national security requires continued progress in research and development which can come only from dynamic and competitive privately owned industry."

"Fiscal immorality . . . brings about waste of man power, concentrates power in a central government, fosters corruption and privilege, and is followed by moral decay at all levels."

"Use of the police power of government is typical of free enterprise. The police state government is typical of Socialism—and Socialism is a junior-grade variety of Communism that is looking for promotion."

"The use of life insurance to provide protection and security carries with it a sense of doing something for one's self and his family. The same cannot be said for social security, unless social security becomes regarded as something which is bought and paid for on a basis comparable to life insurance."

"Today, we have to some extent lost sight of the fundamentals on which our society rests. Freedom and equality of opportunities were basic guaranties. Yet freedom has been mortgaged, bit by bit, on the plea of crisis or emergency. Rights of minorities in the economic area have been disregarded, to the point where the virtues of thrift, enterprise, and initiative have lost much of their glamour."



2500

P. S. I.

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PROVIDE THE SENSITIVITY
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Apart from bourdon tube operated pressure controls, Mercoid offers a line of bellows and diaphragm actuated controls.

Explosion-proof and weather-proof cases are adaptable to practically all series.

If you have an automatic control problem involving the control of pressure, temperature, liquid level or mechanical movement, write for Catalog No. 700A.



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REMARKABLE REMARKS—(Continued)

N. B. TRENHAM
General manager, California
Taxpayers Association

"Some people say government is a business. It is not a business. Government produces no wealth, but subsists by extracting wealth produced by business and individuals. Good government involves balance between necessary services and costs."

H. E. HUMPHREYS, JR.
President, United States Rubber
Company.

"For all too long business has been the whipping boy of government. Now that we have the opportunity to be treated as respectable equals on the American team, let us be fully worthy of our trust. This is no time for gloating. It is no time for talk about turning back the clock, or even thinking about it."

EDITORIAL STATEMENT
The Wall Street Journal.

"The British government's effort to produce poultry and eggs in West Africa has flopped, *The New York Times* reports from London. No doubt this is sad news for the meat-short British. But the taxpayers there can get some consolation from the fact their dollars will no longer be poured down this socialistic dream-drain. As near as we can tell from the reports, the cost of a pound of chicken or one egg produced by this venture was \$8.60."

GEORGE W. STRAKE
President, Aluminum Products
Company.

"Totalitarianism, whether we call it Socialism or Communism, is nothing else than the forcible organization of a chaos created by the selfishness of many of the rich of the old capitalistic system. It merely carries to an extreme the false principle that man lives only to create wealth, either for a few individuals or a few bureaucrats. The liberal capitalist said: 'This is mine, for me'; Communism says: 'This is ours, for us, but I the dictator will tell you what is yours.'"

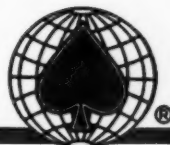
CHARLES ALLEN THOMAS
President, Monsanto Company.

"Public opinion polls have demonstrated that many Americans—too many Americans—still suspect many big business bosses of much greed, few scruples; partly, I imagine, because we have been so articulate about our system and so inarticulate about this 'something else' beyond the material or visible returns. Sure, everyone knows what we're against. But what are we for? What are we, as businessmen, for? In our public incantations, let's let people know that, too."

G. KEITH FUNSTON
President, New York Stock
Exchange.

"Capitalism will stand or fall in direct ratio to the support it gets from the public. That support will be fully forthcoming only when all the people share in Capitalism and all the people know that they do share in Capitalism. . . . The goal of the securities industry is to create a nation of share-owning capitalists; to make every man and woman a shareholder in our great corporation. . . . Let's not lose sight of the industrial progress which profits have made possible. Take away the profits and you destroy Capitalism and substitute Socialism or Communism."

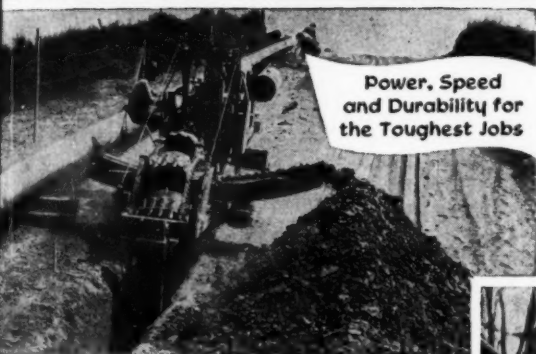
YOU *Do More* WITH **CLEVELANDS**



more trench... in more places... at less cost...



**Compact Design,
Precision Control
for the Tight Spots**



**Power, Speed
and Durability for
the Toughest Jobs**

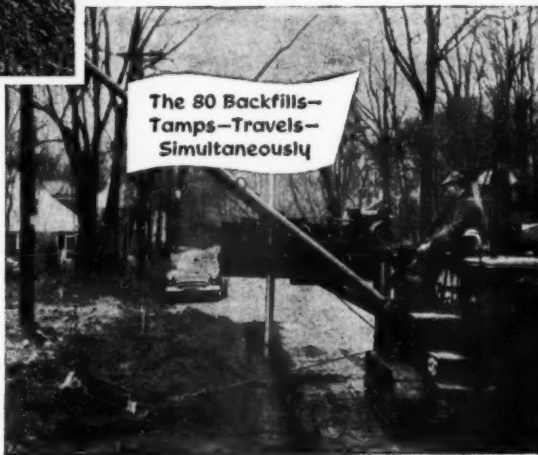
✓ CLEVELANDS' wide range of speed *combinations*, their wide variety of trench sizes and their famous dependability assure you *more trench*.

✓ Compact, correctly balanced, full crawler maneuverability and lower ground bearing pressure permit working in close quarters, in all soils and terrain—assure fast easy loading for quick jumps by truck and trailer—for work *in more places*.

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Backfills • Tamps • Lays Pipe
*Does all types of Light
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One-Man Operated
*Saves Time, Work and Money
on all trench completion jobs •*

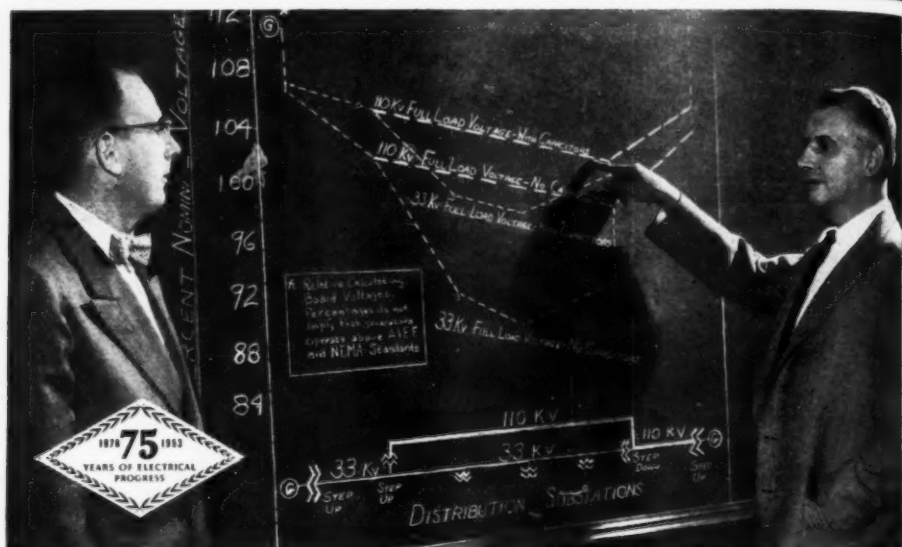


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VOLTAGE IMPROVEMENT obtained with switched capacitors is discussed by F. M. Reed, (right), System Planning Engineer for Pennsylvania Electric, and A. M. Dawson, G-E Sales Representative. Blackboard diagram summarizes effect of capacitors on system regulation.

G-E switched capacitors help regulate voltage on Penelec's whole system

120,000 kvar of capacitors give system-wide voltage-boost, release kilowatt capacity—reduce system investment.

To complement its generator bus regulation, the Pennsylvania Electric Company of Johnstown, Pa., has installed 120,000 kvar of switched capacitors. Within the next year, this will be increased to 150,000 kvar or 1 kvar for every 3.64 kw of its estimated 1953 peak load of 546,000 kw.

The automatically controlled capacitors assure adequate local generation of kilovars and provide a needed voltage boost on distribution circuits. But they do more than this.

By relieving transformer, transmission, and generating facilities of reactive load, the capacitors reduce voltage drop and im-

prove voltage regulation throughout the entire system—as much as 20% at full load at the distribution level.

This permits the Penelec system to carry more kilowatts within the limits of good regulation. And since the cost of capacitors needed to release capacity is less than the cost of new capacity, the system investment per kilowatt is reduced.

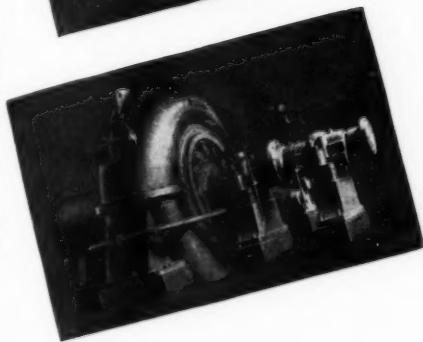
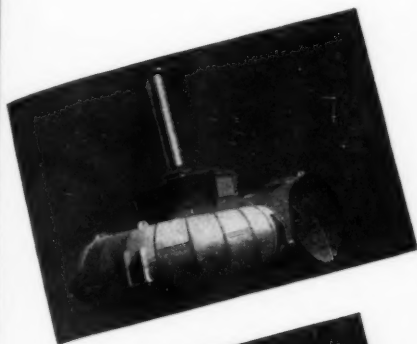
G-E capacitors may prove economical on your system, too. For more information, get in touch with your local G-E Apparatus Sales Office. General Electric Company, Schenectady 5, New York. 44-1E

GENERAL  ELECTRIC

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... a standard of quality since 1862



Leffel hydraulic turbines have meant quality since the first Leffel turbine was built in 1862. In the years following that time the plant has been modernized, and the newest equipment has been added. But that original policy of integrity and quality, begun over 91 years ago, has remained unchanged. A Leffel turbine is still designed and manufactured to give decades of service (there are Leffel turbines in use today which were installed over half a century ago). Time has shown that the quality features of a Leffel turbine pay dividends in dependability and efficiency for the power plant.

The turbine installation in a hydraulic power development must give many years of reliable service. With Leffel turbines you can be **sure**. Write, wire or phone today.

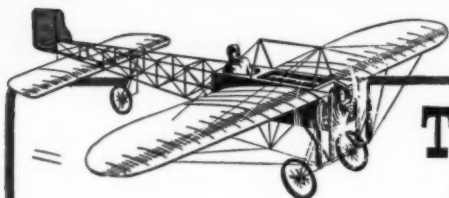


THE JAMES LEFFEL & CO.

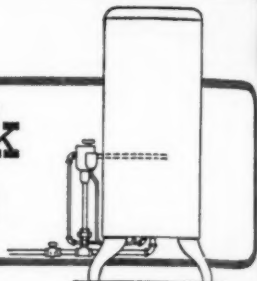
DEPARTMENT P • SPRINGFIELD, OHIO, U. S. A.

MORE EFFICIENT HYDRAULIC POWER FOR 91 YEARS

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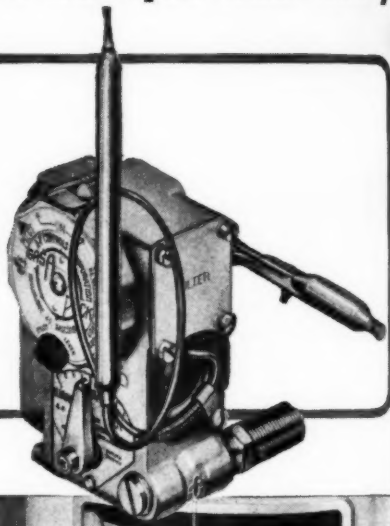
**Tops back
in 1909**



but here's what you want today



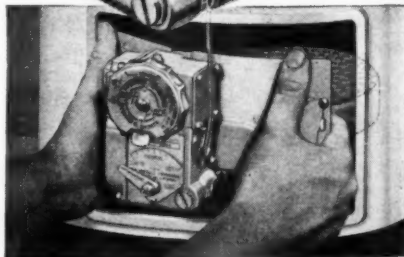
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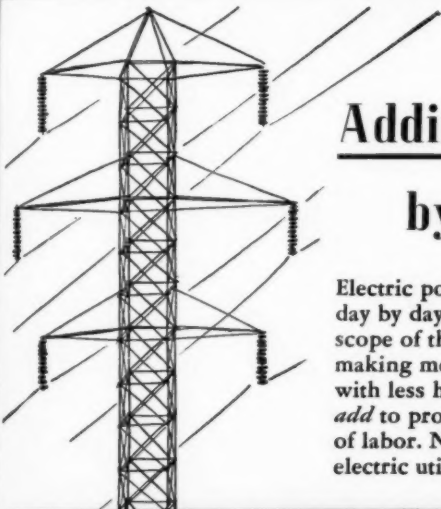
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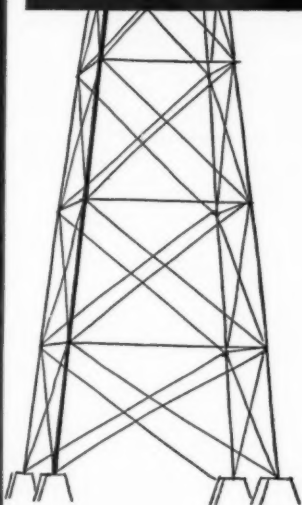
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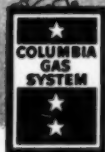
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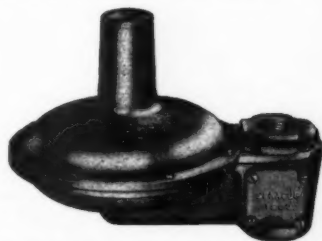
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FOR SERVICE FROM TO			DATE OF THIS BILL
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14049		

WARREN WATER WORKS WARREN, NEW YORK			
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BILLING DATE		NET	
JUN 2, 1953		125	
SERVICE PERIOD		GROSS	
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OFFICE HOURS AS FOLLOWS: MONDAY THROUGH FRIDAY 8:30 A.M. TO 5:00 P.M.			

WARREN WATER WORKS WATER BILL		
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JUN 12, 1953		
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157 125		
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Utilities Almanack

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FEBRUARY

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26	Th	☿ National Adequate Wiring Conference begins, Chicago, Ill., 1953. ☿ New England Gas Asso., Accounting Division, begins meeting, Boston, Mass., 1953.
27	F	☿ Controllers Institute of America, Southern Conference, begins, Houston, Tex., 1953.
28	Sa	☿ National Association of Corrosion Engineers will hold meeting, Chicago, Ill., Mar. 16-20, 1953. ☾

☾

MARCH

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1	S	☿ Southern Safety Conference begins, Atlanta, Ga., 1953.
2	M	☿ American Society for Testing Materials begins convention, Detroit, Mich., 1953.
3	Tu	☿ Kentucky Independent Telephone Association begins annual convention, Lexington, Ky., 1953.
4	W	☿ Public Utilities Advertising Association, Region 1, begins meeting, Boston, Mass., 1953.
5	Th	☿ Pacific Coast Electrical Association, Engineering-Operating Section, begins conference, Long Beach, Cal., 1953.
6	F	☿ American Society of Civil Engineers ends 5-day national convention, San Francisco, Cal., 1953.
7	Sa	☿ Southeastern Electric Exchange will hold annual conference, Boca Raton, Fla., Mar. 23, 24, 1953.
8	S	☿ North Central Electrical Industries begin electrical industry convention, Minneapolis, Minn., 1953. ☾
9	M	☿ National Electrical Manufacturers Association begins winter meeting, Chicago, Ill., 1953.
10	Tu	☿ National Association of Purchasing Agents, Public Utility Buyers Group, ends 2-day meeting, New Orleans, La., 1953.
11	W	☿ Texas Telephone Association ends 3-day annual convention, Dallas, Tex., 1953.



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Preparatory operation to placing lines in Clear Lake, Louisiana.





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Public Utilities

FORTNIGHTLY

VOL. LI, No. 5



FEBRUARY 26, 1953

Modern Proof of the Present Value Rate Base

Under pressure of inflation, a number of state commissions have been asked to give special consideration to the factor of present fair value in determining a base for fixing utility rates. Here is a simple way to trend electric utility costs through price indices. By using a calculated deduction for obsolescence, the author feels he has met any objections about property not likely to be reproduced under current operating conditions.

By JAY SAMUEL HARTT*

IN many discussions of utility rate base, by regulatory authorities, increased cost of utility property "during periods of inflation" is considered as temporary. The impression is left that there is some normal price level to which ultimately prices will return. Justice Brandeis, in 1923, in presenting his argument for original cost rate base in his concurring opin-

ion in the Southwestern Bell Telephone Company Case,¹ apparently gave great weight to the assumption that prices only fluctuated, with a certain return to lower levels after inflationary periods. He was much concerned with the fate of the investor at high prices if he must accept a low rate base after the price decline.

*For personal note, see "Pages with the Editors."

¹ Missouri ex rel Southwestern Bell Telephone Co. v. Public Service Commission, 262 US 276, PUR 1923C 193.

PUBLIC UTILITIES FORTNIGHTLY

Of course, Justice Brandeis introduced into his opinion a statement contrary to the majority decision and to settled precedent when he stated: "The thing devoted to the public use is not specific property, tangible and intangible, but capital embarked in the enterprise. Upon the capital so invested the Federal Constitution guarantees to the utility the opportunity to earn a fair return." If he was right and the Supreme Court has been wrong when it held that "The property is held in private ownership, and it is that property, and not the original cost of it, of which the owner may not be deprived without due process of law," price level is of no significance. However, we must assume that if this latter rule was correct when laid down, then, in the absence of purchase or confiscation by the public, the owner still owns property and not some undefined limited interest in the earnings.

WE might also mention that Justice Brandeis stated that common stockholders should "have the opportunity of earning a return commensurate with the value of the capital at the time it was embarked as stock in the enterprise." Although he offered no plan for securing such a return to individual stockholders, it is apparent that he felt they should receive some advantage of guaranteed income at the rate expected by them in exchange for special treatment of their investment.

It is interesting to note that he relied for his theory of price fluctuation on a study of the Bureau of Labor Statistics' "Index of Wholesale Prices of All Commodities." Thirty years ago, before the development of well-known

utility cost indexes, reliance on so inappropriate a measure of utility cost may have been understandable. Even then it was referred to at times as the "ham and eggs" index by those who disagreed with its use. Today, when indexes of various types of equipment costs, as well as composite indexes of utility construction cost, are readily available, there is little excuse for depending on so inapplicable an indication of price variation. There is even less excuse for using for this purpose the Bureau of Labor Statistics' "Consumers' Price Index," sometimes called the "Cost of Living Index," with its reciprocal measuring the purchasing power of the consumer's dollar. In fact, while the "Consumers' Price Index" rose 70 per cent from 1935 to the end of 1947, the element of cost of gas and electricity entering into the index decreased 10 per cent. This contrast has no special significance except to illustrate that all price movements do not necessarily proceed in the same direction.

FOR the purpose of showing the actual trend of electric utility costs through two World wars and during the intervening years, there is plotted on page 269 a composite electric utility construction cost index called the Handy-Whitman index. This index is published semiannually by Whitman, Requardt and Associates of Baltimore and has been widely accepted as reasonably accurate in showing general cost trends. For the purpose of comparison there are plotted on the same sheet the Bureau of Labor Statistics' "Consumers' Price Index" and "All Commodities Wholesale Price Index." In 1923 Justice Brandeis, after exam-

MODERN PROOF OF THE PRESENT VALUE RATE BASE

ining past trends of commodity prices made an accurate prediction as to the future trend of such prices when he wrote that "the price level may fall to that of 1914 within a decade," but he was wrong in assuming that utility construction costs, or even consumers' costs in general, would follow the "All Commodities Index."

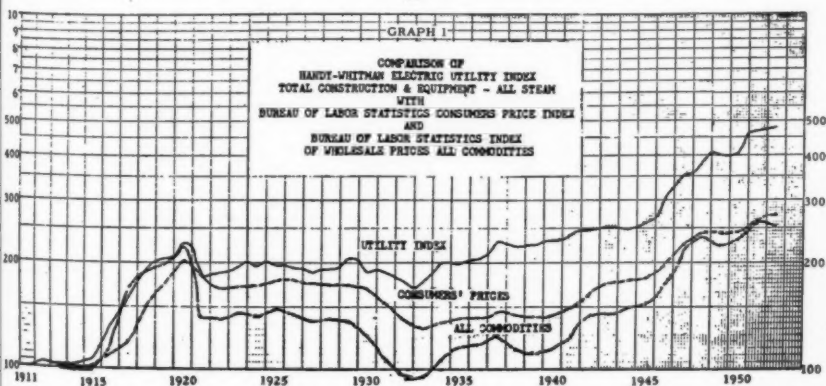
It is quite possible that the record in the Southwestern Bell Case, then being considered, contained no adequate presentation of the trend of telephone construction costs. When spot cost alone or even cost averages are presented as evidence of value without some indication of the history of such costs, the court or commission is given no basis for judging the stability of the price level or for estimating a reasonable rate base for the future. This is particularly true if it is apparent that costs offer little promise of stabilizing at current levels. The burden is on the company to present its case so that such important misunderstandings as that of Justice Brandeis may be avoided.

The graphs presented below and on

page 273 are offered in illustration of evidence which may be used to insure a proper record on this important phase of rate base determination. The graph on this page is, in this case, the Handy-Whitman index of the construction cost of an electric utility in the North Atlantic area of the United States which produces its electricity in steam-generating stations. Attention already has been called to the inapplicability of the "Consumers' Price" and "All Commodities" trends which also appear on this page. No further mention will be made of them.

Before further consideration of these graphs it should be noted that the vertical scale is logarithmic. Equal vertical distances represent equal *percentage* changes in cost from any base selected; thus, the 100 per cent increase from 100 to 200 is the same vertical distance as that from 200 to 400, and the vertical distance from 150 to 300 is the same as that from 300 to 600. By using this scale relative cost increases are presented graphically in their proper relation.

Graph 1 shows plainly that the trend of electric utility construction costs has



PUBLIC UTILITIES FORTNIGHTLY

been generally upward during the past forty years, with major increases occurring in steps coinciding with the two World wars. In each instance costs nearly doubled, and a third rise has taken place after a slight decrease before the outbreak of the Korean war.

THE base of the index is 100 in the year 1911. The latest published point was 480 at July 1, 1952. The curve shows that electric utility construction costs fluctuated in narrow limits in the period 1911-1914 and then rose rapidly after World War I broke out in Europe with an especially abrupt rise following the termination of the war. Then there was an abrupt decline in 1921 as the postwar boom broke, followed by recovery and a relatively stable price level for a considerable period of time. A sharp decline occurred in the depression years, although 170, which was the lowest point reached at that time, was still far above prewar. Then, beginning in 1934 there was a long period of moderate increase with some fluctuations to the start of World War II.

During this war, with prices more closely controlled, there was little increase during 1942 to 1945. Then with decontrol there was another abrupt rise which apparently was arrested in 1947. However, increased labor costs started the curve climbing again to a high at January 1, 1949, of 407, from which it decreased during the year to 400.

Then cost increases in the first half of 1950 caused a small rise to 409 at July 1, 1950. Then during the last half of 1950 under war conditions came the more pronounced increase to 462

at January 1, 1951, with further increases during 1951 and 1952 to 480 at July 1, 1952.

IN order to show more clearly the relative behavior of electric construction costs during the two World wars, the data on Graph 1 are shown in another form on Graph 2 on page 273. The solid curve for the years 1911-1940 is identical with that of Graph 1. The dashed curve on Graph 2 for the years 1938-1950 is also identical with that for the same years on Graph 1, but is moved to a position under the solid line so that the years 1913 and 1938 are together. The dotted line on Graph 2 for the years 1950-1952 is also identical with the solid line on Graph 1 for the same years, but is moved so that its first year, 1950, is in the same space with 1917 and 1942. This brings the first years of our participation in the three wars together. The points on the dashed curve are determined by simply transferring from the base 100 in 1911 to base 100 in 1938 by dividing all points on Graph 1 by 224, which is the 1938 average. The points on the dotted line are determined by transferring to base 100 in 1950 by dividing all points on Graph 1 by 399.

On Graph 2 it will be seen that the years of our entrance into the two World wars, 1917 and 1942, are together, but that because of the longer duration of the second war, corresponding points after that date do not fall exactly together. However, the slopes of the two curves can be compared readily.

Reference to the trend through World War I shows that from the prewar years 1911-1913 to a relatively



No Rule of Thumb for Depreciation

T*o the extent that depreciation may happen to equal the difference between current cost and original cost, statement of the property value at original cost would be a rough method of insuring depreciation deduction. However, it can hardly be expected that the varying cost levels of the long period during which a utility's property is built will form a pattern in each instance which provides a precisely correct increment to the rate base and compensates for any obsolescence which may have developed in any part."*

stable postwar period in the middle twenties, prices rose to a new level of approximately 195, or 95 per cent above prewar. The maximum increase was to 226 in 1920. Comparing World War II with World War I, price controls appear to have restricted cost increases during World War II. Even the highest postwar peak prior to the outbreak of the war in Korea was only 182 as compared with the 1920 high of 226. Likewise the level of apparent stabilization during 1949 averaged approximately 180 as compared with 195 in the middle twenties.

REFER now to the dotted line of Graph 2. Because of our entrance into the Korean war in its first year, the comparability of the dotted curve with the others is not as exact as that between the solid and dashed

lines. However, the delay in application of controls permitted a rapid rise of costs in the first year of the war which equaled that of all of World War II. In fact, the most recent point of 120 per cent of pre-Korea was not reached during World War II, the highest point on the dashed curve during the years 1938-1945 being 116.

In placing these curves together it is not meant to imply that the recent movement of costs to higher levels is likely to proceed to the extremes of the two World wars. It does appear, however, that past history of the results of war inflation, considered with current pressure for higher wages which are said to be required by high living costs, indicate some further upward movement of construction costs. It is the duration and extent of this movement which are less certain.

PUBLIC UTILITIES FORTNIGHTLY

The above is offered as illustrative of the factual data and explanation which are needed to support the contention that value, as measured by utility construction dollars, has varied; that the trend has been upward, and that costs have never returned after major increases to levels existing prior to the price movement. In judging the importance of such evidence, consideration might be given to the statements sometimes made that if inflation ever occurs in this country to the extent that it did in China, Germany, or France, values would necessarily be affected. We think of our own "50-cent dollar" with some concern. The difference is only in degree and not in principle. Of course, variation in the unit of measurement is more important as it becomes greater and still more important as it becomes permanent. Only by proper presentation of the facts can the utility expect to obtain adequate consideration from the regulatory authority.

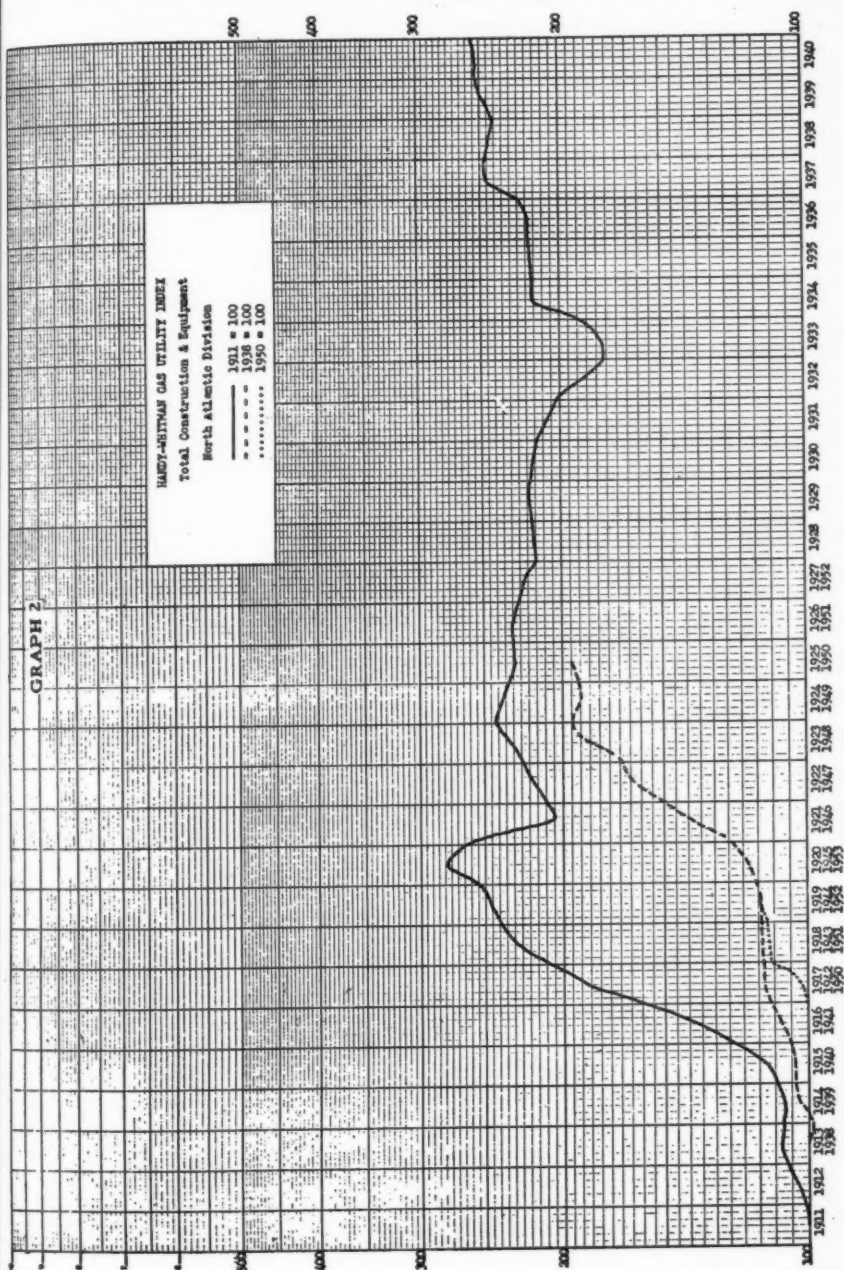
BUT suppose the regulatory authority has been furnished and has considered evidence of increases in construction cost over original cost. Even with this evidence before it, commissions have decided in some instances that today's prices should be disregarded on the ground that identical property would not be constructed today because of changes or improvements in construction methods or equipment.

Their reasoning is that because the property is obsolete by present standards, it is not worth what it would cost to reproduce it in its original form at a present cost level higher than original cost.

In some instances this is certainly true, although the criticism is limited in applicability to certain classes of property in which marked improvements have occurred. Even in these instances depreciation can be suitably measured and deducted without resort to the makeshift expedient of ignoring proven construction cost increases.

As a reason for ignoring higher present construction costs of old property, the greater efficiency of new equipment is sometimes recited. For example, modern electric generating stations undoubtedly produce electricity at lower operating expense than plants built twenty years ago. Also, large units cost less per unit of capacity than the smaller ones generally found in older plants. Thus, a power plant such as is now constructed with large units may cost \$165 per kilowatt of capacity as compared with one which twenty years ago cost \$90 per kilowatt and would now cost \$200 per kilowatt to replace, using units of the existing sizes. Thus, there might be 20 per cent obsolescence to be deducted from current cost because of the small size of the units unless there is a positive advantage of having the smaller units in the system, as may be the fact. Further, as already stated, the new plant will be more efficient than the old, both because of larger size of units and because of improvements in plant design. The relative efficiencies may be readily determined for the conditions under which the plant actually operates. By appropriate weighting of these factors a value may be determined for the old plant which will give effect to higher construction costs but which

MODERN PROOF OF THE PRESENT VALUE RATE BASE



PUBLIC UTILITIES FORTNIGHTLY

will take into account all elements of depreciation including obsolescence, and which will not burden the rate-payers with excessive charges by its inclusion in the rate base. That value so found may be more or less than original cost.

To the extent that depreciation may happen to equal the difference between current cost and original cost, statement of the property value at original cost would be a rough method of insuring depreciation deduction. However, it can hardly be expected that the varying cost levels of the long period during which a utility's property is built will form a pattern in each instance which provides a precisely correct increment to the rate base and compensates for any obsolescence which may have developed in any part.

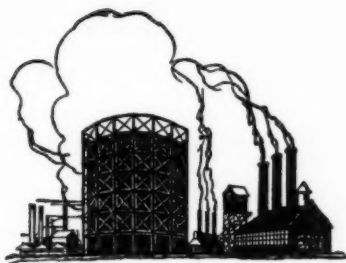
But suppose, again, that statement at original cost of those parts of the property which become obsolete does compensate for such obsolescence. What about those property elements which do not become obsolete? For example, until someone develops radically different methods of distributing electricity and gas, there will be little obsolescence in electric poles and wire and in gas mains. It is apparent that holding these property elements at original cost for the same reasons which under the above assumption might apply to production plants would be completely unjustified.

The necessity is emphasized for full presentation, not only of adequate evidence to show present construction costs in relation to the past, together with such indication as may be derived

of trends for the future, but also for full disclosure of sound procedures for estimating obsolescence as an element of the required deduction for depreciation. Proper proof will show that increase in value caused by change in the size of the construction dollar cannot be exactly or approximately offset by reduction in value caused by technological advances. A judgment based on the assumption that the two factors tend to cancel each other is poorly founded. It is the duty of the utility to furnish full and convincing evidence on depreciation which will permit its consideration in all its phases. With such presentation no excuse will be left for ignoring the increment of value properly allowable on account of construction cost increases.

IN conclusion, any decision by an impartial court or commission must be based on evidence. It is the duty of a utility to present *all* evidence bearing on the value of its property. This may well include an estimate of construction cost at a recent price level, together with data, such as disclosed by the graphs here included, to show where prices are in relation to where they have been. Care should be taken to furnish data that are, in fact, applicable.

Full testimony should be furnished on depreciation from all causes, with complete disclosure of obsolescence. Such testimony carefully prepared and competently presented may not always obtain for the utility all that it believes justified, but it will discharge the obligation of the management to the stockholders to do the best job possible in their interest.



A Bumper Crop of Gas Compressor Stations?

An important part of the gas industry's dynamic post-war growth is represented in compressor stations and related facilities. Expansion of facilities to "push" gas is a saga of terrific changes and improvements in natural pipeline growth all over the nation.

By LARSTON D. FARRAR*

THERE'S a tiny statistic buried in the latest volume of *Gas Facts*, edited and published by the American Gas Association. In some respects it might deserve more space and attention than it gets, although this important statistical volume is crammed full of facts and figures about the gas industry in all its phases.

The statistic deals with compressor stations. This figure 334 was out of date before it got into print, because of the skyrocketing growth of the natural gas transmission industry.

An important part of this growth is represented in compressor stations and related facilities. Anyone who wants to know how much emphasis natural gas transmission companies are placing on compressor stations,

employee morale at these stations, improving the stations from the twin standpoints of utility and beauty, and many other facets of this subject, need only glance through the employee publications of the major pipeline companies. He can also scan the Federal Power Commission docket, which is crowded with applications for more pipeline facilities, including, in most instances, additional compressor station construction.

Every time a natural gas pipeline company starts thinking of expansion of service to a new area, it must think of compressor facilities, as vital to the overland pipelines as propellers are to ocean liners. Although "pushing" the gas is only one of the many jobs undertaken at a typical compressor station, it still is the prime reason why these stations are in existence. Natural

*For personal note, see "Pages with the Editors."

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gas, as everyone should know by now, doesn't automatically flow through those thousands of miles of pipe from the Texas, Oklahoma, Louisiana, and other fields to New York, Chicago, or San Francisco.

MANAGEMENT literally has had to move mountains, from an engineering standpoint, not to mention financial and in other ways, to build lines and to place compressor stations so that these will be of maximum benefit and will afford economy of operation.

Literally no one knows how much the natural gas pipeline industry has invested in compressor facilities alone, but a rough guess is around a half-billion dollars. While some compressor stations cost a good deal less than \$1,000,000 and others cost a great deal more, a fair guess is that when you see a compressor station community, with its neat homes, streets, and tremendous equipment, you are looking at an investment of at least \$1,000,000, and maybe even \$2,000,000, or even \$3,000,000.

"It would be difficult for anyone accurately to give the cost of an 'average' compressor station," J. J. Hedrick, president and general manager of the Natural Gas Pipeline Company of America, which operates five 10,000-horsepower compressor stations, has pointed out. "The cost of compressor stations, like that of a mining camp, depends on many factors, such as the size and the refinements a company might use, whether or not housing accommodations are built for the employees, and other factors. Another factor entering into the cost of a station is whether or not difficulty is en-

countered with labor attitudes. One station of a related company cost considerably more than other stations of like design because of this factor.

"A compressor station, with a main building housing five engines, auxiliary building furnishing power for electricity, water, etc., necessary piping for control valves, office building and community hall, water towers, dust scrubbers, water coolers, and housing facilities for employees would cost approximately \$3,000,000."

PART of the story is the several thousand Americans who live in compressor station communities which now dot the countryside from coast to coast. These Americans usually have all the modern conveniences without some of life's inconveniences, but life still *can* be pretty rugged at a compressor station community far from civilization, during emergencies. Some of the compressor stations are located far off the beaten track. Due to the conditions beyond the control of anyone except Mother Nature, these employees encounter such inconveniences as dust storms that rage across the Texas plains; floods that imperil the communities and the vital communities they are protecting; cyclones and tornadoes; explosions and emergency calls up and down the lines; and, sometimes, isolation that gets on the nerves of many persons who are used to life in more cosmopolitan areas of God's green earth.

Company publications of the various natural gas pipeline transmission companies are profuse with news, departments, and pictures about the people who live in their "company towns"—the compressor stations up and

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down the various lines. Apparently, life can be very satisfying and exciting in these out-of-the-way places.

MANY of the pipeline transmission companies are quite proud of the communities which they have planned and constructed for personnel of the compressor stations along their lines. Visitors to the beautiful station sites of the Texas Eastern Transmission Corporation lines, for instance, can hardly imagine how the areas looked in their natural state. Although these clean and attractive plots today are pictures of good maintenance and efficient planning, they had to be grubbed out of the wilderness.

Compressor Station 6, near Bald Knob, Arkansas, for instance, is located on ground that once was part of a huge swamp. Others, like Station 10 at Lick Creek, Illinois, were unusually tough to build. A creek was filled in to provide the firm ground on which it rests, and Station 20, near Wind Ridge, Pennsylvania, is located on a site where the entire side of a mountain was blasted off to create level land. Some were comparatively easy to build. Station 11, near Norris City, Illinois, was built in a cultivated corn field.

Why was such terrain chosen for compressor station sites? Remember that the construction was undertaken when the Inch lines were laid for

Uncle Sam to transmit petroleum products needed to win World War II. Since the shortest distance between the oil fields of the Southwest was a straight line, the pipelines were laid as closely as possible to the straight line, regardless of construction difficulties. Pump stations were required at specified intervals and were erected where efficient engineering specified.

IN May, 1947, when Texas Eastern bought the pipelines, the system was altered to suit gas pipeline operations; and an extensive restoration and construction program was undertaken. Where centrifugal gas compressor stations were put into operation, the old wooden compressor buildings were torn down and replaced with new metal structures designed for maximum operating efficiency and convenience.

To allow this work to proceed according to plan, roads which had been impassable in bad weather were improved. Truck load after truck load of gravel was hauled, dumped, and spread; ditches were graded and bridges repaired or installed whenever necessary to permit all-weather traffic. The station grounds were graded and landscaped and a fertilization and grass-planting program soon gave each Texas Eastern station a "face lifting." At the same time, steps were taken to repair, remodel, and expand



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housing facilities. Every station site took on a new look and station personnel, grownups and kiddies alike, participated in the grooming and maintenance of grounds and buildings.

Since Texas Eastern purchased the lines, an unofficial beautification program has been in effect. Employees have sodded bare spots, planted flowers, and set out trees. Beauty spots have been created in the woodlands, swamps, mountains, and farm lands.

THE *Mainliner*, publication of the Michigan-Wisconsin Pipe Line Company, in a recent issue, described a typical compressor station town along its lines in this way:

The actual compressor operation . . . began January 21, 1951. There was, of course, a great deal of preliminary work and organization leading up to the big day when this station became a vital operating unit in the pipeline system carrying natural gas from Texas-Oklahoma fields to the states of Michigan and Wisconsin. On that day, only five of our huge 1,320-horsepower KVG engines were completely installed and operating. Installation of the sixth, and final, engine was completed . . . and the full battery of engines has carried the compressor load since that date. . . .

Headaches were plentiful in the beginning. Well do we recall the 20 below zero weather last January before the boiler was put into operation, and open fires were forbidden because of the possibility of gas leaks. The only warm place on the station was between the cylinders of the mighty KVG engines. Some of us always will have a high and *warm* regard for these engines for that reason alone, even though these engines have been remarkably smooth and trouble-free in their operation.

The construction contractor remained on the job for some two months

after station operations began and when the contractor's men finally completed their work and left, our station seemed somewhat like a ghost town. However, adjustments to normal were soon made and Station No. 3 settled down to do its part in boosting the gas up the line.

After smoothing out the first kinks in our operation, Superintendent Richardson turned part of his attention to making our station a better place to work and live in. Trees were planted, grass was sown, ground was leveled, and roads were improved. Buildings, engines, and equipment were painted, and many tasks directed toward the improvement in efficiency, convenience of operation, and promotion of safety were also done.

SOMETIMES, a company names its compressor stations in honor of notables who have played a part in the pipeline's development. For instance, the board of directors of the Michigan-Wisconsin Pipe Line Company, by resolution, recently named and dedicated the company's field compressor station near Guymon, Oklahoma, as the "Edgar G. Hill Station," which the directors felt was "a fitting tribute to the exceptional value of the services rendered" by Mr. Hill, who was vice president of the engineering firm that did the actual construction of the lines.

Texas Gas Transmission Corporation's 3,000 miles of pipeline operations consist of three systems, for the most part, and the company has varying compressor station problems.

There are four compressor stations on the 18-inch Monroe (Louisiana)-to-Memphis (Tennessee) system, all of them built before 1930. Operating pressures on this system allow for discharge pressures from the stations as

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Making Compressor Stations Workable

"IT seems evident, from a thorough study of the natural gas transmission industry, that more and more emphasis is being placed, and will be placed in the future, on technical and engineering problems in connection with compressor stations and on psychological and 'human engineering' phases of life among the personnel at compressor station communities. Every new sociological and technical improvement, either in the performance of the machinery or the happier living of the personnel, will help to make a pipeline more profitable for all concerned."

high as 500 pounds per square inch. The size of these stations ranges between 10,000 horsepower for the field station and 5,400 horsepower for the smallest line station.

THE 26-inch line includes 12 compressor stations, some built in 1950 and some in 1951. A thirteenth compressor station on this line now is under construction. Operating pressures on this system allow for an 810-pound discharge pressure from stations. Suction pressures vary according to the gas loads but are somewhere around 560 to 650 pounds. These stations range in size from 11,000 horsepower to 5,300 horsepower for the smallest station on the extreme end of the line. After additions presently being made are completed, these figures will be raised to 12,320 and 7,940.

The Kentucky-Indiana lateral sys-

tem includes four compressor stations, three of which were built between 1935 and 1943, and were originally for the purpose of pumping gas from local gas fields into the pipeline system. A fourth station was built during 1951-52 as a field storage station to pump gas from the pipeline into the Alford, Indiana, storage field and from the Alford field back into the pipeline during the winter. These stations range from 300 horsepower to 880 horsepower.

The complement of a typical station on Texas Gas Transmission system's new 26-inch line is twenty-three men, including a station manager, a maintenance foreman, a clerk, five A operators, nine C operators, a machinist, a repairman, three D operators (or laborers), and a yardman. The maintenance foreman serves as assistant to the station manager in the operation of

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the station. The A operator is a man normally referred to as a shift engineer, and a C operator is a man normally referred to as a shift oiler. The D operator is a mechanical helper in the repair force.

A problem found in all pipeline systems, but solved uniquely by Texas Gas Transmission Corporation, has to do with the ability to have compressor units available for regular overhaul periods. Because of the load characteristics of that system—that is, the seasonal delivery schedules of gas—a maximum amount of gas is handled to the extreme end of the line during the summer and is diverted during the winter for delivery at intermediate points. This means that Texas Gas has a surplus horsepower, or available time for repair of units on some stations, during the winter, and at other stations during the summer, without necessitating undue curtailment of gas.

NOT everyone realizes the immensity of the task of moving natural gas through thousands of miles of pipeline from the gas fields to markets. Millions of man-hours of hard, arduous effort and millions of dollars in materials and supplies are expended, each month, to maintain and repair pipelines, to keep compressor engines running, and to perform the myriad of tasks necessary to keep billions of cubic feet of natural gas moving to homes and factories that use it in ever-increasing numbers.

And few people realize that the task of getting gas from wells into the pipeline—or main line—is itself a formidable job. Perhaps this is because the term “natural gas” is misleading, tend-

ing to give the picture of a product all ready to use. Actually, natural gas as it is found underground is no more ready for kitchen use than is, say, dirty river water ready for drinking. Extensive and expensive treating is necessary to make natural gas an economic, desirable, and healthy fuel, and the compressor stations play a vital rôle in this task.

THERE are four things which must be done to practically all gas before it is satisfactory for consumption and transmission. First of all, the pressure of the gas must be brought to a proper level. In the case of gas coming from wells at high pressure, the pressure is reduced. In the case of gas coming at low pressure, the pressure is increased by compression.

Secondly, certain valuable products must be extracted from natural gas if maximum economy is to be achieved. Natural gas usually contains significant volumes of such things as natural gasoline, propane, and butane vaporized within it. Left within natural gas, these products would perform no significant good. In fact, they would tend to clog the pipelines and would be detrimental to natural gas service. Extracted from natural gas, however, they perform valuable economic functions and make it possible to distribute gas at less expense.

Thirdly, natural gas must be purified. Natural gas usually contains waste gases and acid gases, such as carbon dioxide and hydrogen sulphide. The waste gases add nothing to the value of the gas; in fact, by diluting it, they make it less satisfactory as a fuel. The acid gases are detrimental. They would corrode the pipelines and

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compressor engines, clog up valves and meters, and otherwise interfere with the operation of transmission facilities.

Then, delivered to the consumer, they would corrode and deteriorate his burners and his piping.

Last, natural gas must be dehydrated. The water vapor which is found in natural gas would be very harmful to the pipelines and plants as well as to the equipment of consumers. Were this water vapor to be left in the natural gas, it would tend to condense into water at various points. The water thus formed would dilute and deteriorate lubricating oil in compressors; it would rust and corrode pipelines, compressors, meters, and other equipment. In wintertime, when the pipelines are cold, it would freeze into ice and block the flow of gas through those lines.

PRACTICALLY all of the natural gas delivered is subjected to all four of these processes before it reaches the main lines. However, there are exceptions. Some fields have ideal "sweet" gas which needs very little, if any, purification treatment. It may contain significant quantities of natural gasoline, propane, and butane. But most gas is "sour" in its native state, being about 15 per cent carbon dioxide and

one per cent hydrogen sulphide. It may be passed through purification plants, but not subjected to natural gasoline absorption facilities.

THERE are many variations as to the condition of the gas as it arrives at a company's plants. Sometimes the gasoline has been extracted, but the impurities and the water vapors have been left in. Usually the pressure of the natural gas is too low for treating and transmission. Most plants are designed to handle the quality of the gas received. Some plants are compressor units only. Others have all units—gasoline plants, purification facilities, dehydration equipment, and compressor plants.

In the Hugoton field in the northern Texas Panhandle, the Dumas plant of El Paso Natural Gas Company receives gas from the Phillips Petroleum Company gasoline plant close by. The natural gas arrives at Dumas plant fully processed for gasoline products and with sulphur and waste gases removed but containing appreciable quantities of water vapor. Dumas plant compresses the gas from the 200 pounds pressure at which it arrives to about 775 pounds pressure, dehydrates the gas, and delivers it into the 24-inch line for transmission to the Eunice plant.



Q "EVERY time a natural gas pipeline company starts thinking of expansion of service to a new area, it must think of compressor facilities, as vital to the overland pipelines as propellers are to ocean liners. Although 'pushing' the gas is only one of the many jobs undertaken at a typical compressor station, it still is the prime reason why these stations are in existence."

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USUALLY the first step in getting gas ready for market is pressure control. The most effective pressure for treating natural gas is about 550 pounds per square inch. Most of the time, the first thing that is done to natural gas is to get it to the right pressure for economical and satisfactory treating.

Natural gas in high-pressure wells (high-pressure wells are those with pressure of more than 550 pounds, whereas in legal definitions in writing contracts the term refers to wells with pressures as low as 100 pounds) must be reduced before it is delivered into plant facilities. At Barker Dome, gas is available at pressures ranging from 2,500 pounds to 3,000 pounds pressure per square inch. In the Permian basin, there are many wells delivering gas at pressures in excess of 1,500 pounds per square inch.

These pressures are reduced to the lower treating levels by means of elaborate, complex systems of valves known as Christmas trees in natural gas jargon. As the pressure of the pipe is reduced, the temperature of the gas falls. The tremendous reduction of pressure involved in taking gas down from 1,500 pounds or 2,500 pounds or even 3,000 pounds to 550 pounds without corrective action would lower the gas temperature to subzero levels. The water vapor would freeze solid and the ice would block the flow of gas. Accordingly, heaters are provided at many wells where they are needed.

These heaters—which are fairly large and quite expensive furnaces—burn gas which heats an oil that circulates around pipes carrying the gas. The heat provided by these furnaces offsets the cold resulting from pres-

sure reduction and keeps the gas from freezing. A high-pressure gas well, therefore, has a very elaborate group of equipment to control gas pressure, to heat the gas, and to make it possible to move that gas through a pipeline. Whenever a "switcher" turns a gas well on, he not only has to open the valves but to turn on the heat and to let it heat for a few minutes.

THE gas wells at Barker Dome, in addition to the Christmas tree and the furnace, have a dehydrating unit which pulls out most of the water content of the Barker Dome gas. It is necessary to dehydrate this gas to some extent at the well because the gas is carried through 30 to 40 miles of pipeline before it is delivered into the San Juan river plant. Well-site dehydration prevents the pipeline from freezing up during the cold winter weather.

Just as the gas which has pressure too high for introduction into treating plants must be lowered in pressure, so must gas which has too low a pressure be "brought up" to satisfactory levels. Usually it is the practice to carry out compression before putting the gas through the plants.

The compressor stations which build gas pressures up from the low levels to the higher levels for treating and transmission are known as field stations. The compressor stations which compress the gas from treating plant levels (about 550 pounds) or which maintain transmission pressures are referred to as main-line stations.

The Pipeliner, the exceptionally well-edited employee publication of the El Paso Natural Gas Company, which features news of compressor station community activities, also strives to

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What a Gas Compressor Has to Do

"THERE are many variations as to the condition of the gas as it arrives at a company's plants. Sometimes the gasoline has been extracted, but the impurities and the water vapors have been left in. Usually the pressure of the natural gas is too low for treating and transmission. Most plants are designed to handle the quality of the gas received. Some plants are compressor units only. Others have all units—gasoline plants, purification facilities, dehydration equipment, and compressor plants."

give the employee readers of the publication a good idea of the entire natural gas industry. This publication recently described in great detail the processes outlined above.

THE *Mainliner*, employee publication of the Michigan-Wisconsin Pipe Line Company, which also gives much news of compressor station community activities, recently described the journey of natural gas from Texas to Michigan, through one of its main lines, as follows:

A description of its volume as it speeds east through the 24-inch main line is interesting. If it could get out of the pipeline into the air, it would occupy about 66 times as much space as it does in the line. The gas is compressed by the compressor engines to one sixty-sixth of its atmospheric size to improve its travel both in speed and

volume. Naturally, as it progresses along through the rough interior of the 24-inch line, its pressure gradually is reduced by friction, so that when it arrives at the first compressor station about 50 to 70 miles away, the pressure has decreased to about 750 pounds per square inch and the gas is beginning to take up more space than it should. Compressor Station No. 1 again crowds it up to 975 pounds per square inch and sends it on its way.

This process is repeated again at Station 2, and at each of the stations up its route until it is sent to a sales metering station. It is again checked for volume and heat content and its pressure reduced to a point suitable for the distribution system.

Weather conditions, variations in the size of pipe, and other factors, influence the speed at which the gas travels through the pipeline. Normally, gas that leaves the Hugoton field for a point in Michigan takes about three days to make the trip. . . .

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Compressors are used particularly in connection with storage fields, as well as on the lines.

ALTHOUGH gas-fueled engines drive most compressors on most natural gas pipelines—in fact, all but a few lines use gas without variation for every possible job—some lines use centrifugal compressors driven by electric motors. The Texas Eastern Transmission Corporation, for instance, uses compressor stations of two types on its 30-inch pipeline. One is equipped with reciprocating compressors driven by gas-fueled engines and the other uses centrifugal compressors driven by electric motors. When the executives of the natural gas transmission companies are queried about what type of power they use, the response for the most part is, "Natural gas—naturally!—since it is available in quantity and it is the cheapest and best."

Natural gas companies, recognizing the human interest and natural appeal of uniform communities in out-of-the-way places, are beginning to stress facts about their compressor stations in publicity releases and in annual reports.

Texas Illinois Natural Gas Pipeline Company, when it announced the opening of its new 30-inch Texas-Illinois pipeline (the third supplying Chicago and intermediate markets), pointed out that five compressor stations develop 50,000 horsepower to move the gas. Each is "an up-to-date community having its own housing facilities for employees, paved streets, utilities, and assembly center," having been built to keep the gas moving efficiently through the long line.

Transcon, the employee publication of the Transcontinental Gas Pipe Line Corporation, carries much news about personnel at the company's 19 compressor stations. A recent typical issue, for example, featured an article on the life and experiences of F. B. Haverfield, superintendent of compressor stations for the company. Another typical issue might carry a picture series showing the personnel at a typical compressor station. Transcontinental actually owns 123 homes—each notable for modernity and livability—occupied by compressor station personnel.

United Gas Log, employee publication of the United Gas Pipe Line Company, has recently devoted much space to its company's eight new compressor stations, which have a total of 64,000 horsepower, serving 1,000 miles of new line. The new compressor capacity almost doubles United's former total of 77,351 horsepower installed at the company's 14 main stations and a number of smaller field units.

DEVELOPMENT of precision instruments has been one of the major achievements in the natural gas and related industries, and, in fact, without these instruments, which are used to a large degree at compressor stations, it seems inconceivable that the industry could have reached its present high state of development.

A striking example of effective utilization of instruments can be found in the operation of compressor stations built on the latest style. Take, for instance, the control of power output to achieve proper pressure. A dispatching department, which directs the flow of gas throughout a system, may give

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directions every two hours to the various stations as to the discharge pressure to be maintained. Operators of the stations meet varying pressure and load requirements by applications of different amounts of power. The greater the desired pressure, the greater the necessary power, and vice versa. Power variation can be accomplished by increasing or decreasing the number of engines in service, or by varying the speed of the engines. Control of the number of engine units is a function of the skill and judgment of trained men; engine speed, however, is governed by instrumentation.

Upon receipt of directions from the dispatching department, technicians at the compressor station set at the proper pressure an instrument known as the discharge pressure controller-recorder. This instrument controls discharge pressures and keeps a record of both the suction and discharge pressures. The instrument is "set" at the proper pressure merely by movement of a pointer to the desired pressure mark on the instrument's chart.

By impulse of compressed air, the discharge pressure controller adjusts the governors of the various engines. Every change in load conditions is interpreted instantly by the controller and the speed of the engines automatically increased or decreased, as the case may be.

ISTRUMENTATION in temperature control results in but a few degrees variation of engine temperature throughout the day. This is accomplished by adjustments in the amount of cooling capacity applied to the en-

gines. Cooling capacity at most stations is provided by fin-fan units. These are large radiators suspended horizontally over electrically driven fans. Hot water is pumped through the radiators while the fans blow air through them, the principle being the same as that of the radiator and fan on an automobile. At other stations, however, cooling capacity for engine water is provided by the cooling towers.

The kinds of equipment used throughout compressor stations could be the subject of an article in itself. Suffice to say that the casual visitor usually is amazed at the mass of pipes, compressor engines, valves, and machinery at a typical compressor station.

In fact, even engineers who are not familiar with the methods and problems of natural gas transmission are somewhat intrigued to learn the function of the more unusual installations at compressor stations.

IT seems evident, from a thorough study of the natural gas transmission industry, that more and more emphasis is being placed, and will be placed in the future, on technical and engineering problems in connection with compressor stations and on psychological and "human engineering" phases of life among the personnel at compressor station communities. Every new sociological and technical improvement, either in the performance of the machinery or the happier living of the personnel, will help to make a pipeline more profitable for all concerned.



Area Development Program For Utilities

The economic welfare of any utility company depends upon the prosperity of the area it serves. This may sound trite, but the actual cultivation by a utility of community or area growth can be a matter of considerable concern, because, granted the objective, there are so many ways to do it. Here is an account of a plan which is apparently working out very well.

By DANIEL L. DIEHL*

UNLIKE most business enterprises which sell their products or their services anywhere in unlimited territorial markets, the territorial market for the services of a public utility is relatively limited because it is confined to a designated area usually known as the franchise territory. Thus, the public utility is strictly dependent upon a local market. The success of any public utility in marketing its services depends entirely upon the prosperity of the territory it serves, and it can prosper only as the area prospers. Therefore, the prosperity of its franchised territory becomes a matter of vital concern to any specific public utility.

The economic welfare of any area or franchise territory depends upon

the prosperity of the cities and towns located within and adjacent to that area.

The prosperity of any city or community depends upon wealth created by the production, cultivation, and sale of various and sundry products and services within that area. This wealth, thus created and properly distributed in the community in the form of payrolls, increases the prosperity of individuals, business establishments, and the general community.

With this kind of thinking as a background, Pennsylvania Power & Light Company in 1929 created what is presently known as the area development department. It started as a one-man organization and for about one year was principally devoted to collecting information and properly or-

*For personal note, see "Pages with the Editors."

AREA DEVELOPMENT PROGRAM FOR UTILITIES

ganizing, correlating, and filing that information for future area development work. During the second year of its existence it grew to a two-man department when, in addition to the function of collecting information, a program was started promoting the interest of prospective new industries in central eastern Pennsylvania and actually locating those industries. As the department grew, other functions were added. Today, the area development department is part of the company's general sales department.

THE primary objective of the area development program is to create, develop, and maintain a high degree of economic prosperity in all of the communities within central eastern Pennsylvania. Principally, this is accomplished by locating, establishing, maintaining, and developing diversified and permanent wealth-producing agencies. The over-all result is the creation of a fertile sales market for the services offered to the public by Pennsylvania Power & Light Company.

The basic planning for this action must be done on the community level. Therefore, an objective of equal importance is to insure that every community in central eastern Pennsylvania be made aware of the need for a definite plan of action to provide for its continued economic growth.

Another objective, indirect but also very important, is the betterment of the company's public relations. As the public becomes conscious of the rôle undertaken by Pennsylvania Power & Light Company as a public-spirited citizen, the good will so essential for the company's corporate success is thereby fostered and ensured. The

creation of jobs for worthy people who really need them, the expansion of local markets for local merchants through the development of greater local payrolls, and similar local economic betterment in fields affecting schools, churches, civic organizations, government, service industries, etc., go a long way toward creating desirable public relations. The area development department has a 5-point program to effectively achieve these objectives and co-ordinate the various activities.

The work of the area development department within central eastern Pennsylvania is done through and with the full assistance of all of the company's field personnel. Since the foremost prerequisites of successful area development activities are teamwork and a co-ordination of procedures, it is essential that all efforts complement each other in all phases.

CONSIDERABLE time is spent working with existing industries in an effort to develop and maintain production facilities which already are established in the area. Existing industries are supplied with complete information on all suitable, available industrial buildings and industrial land sites within the franchised territory whenever such industries are interested in finding new plant locations. They are assisted in disposing of their by-products at a profit or on a break-even basis. Very often financing for plant expansion or increased working capital is of vital importance to an existing industry. Such financing is made available to present industries through established financial agencies with the representatives of the area development department acting as in-

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termediaries in bringing together capital and industry.

Present industries are supplied with information on new processes and new products. Many times it is possible to enhance the value of a product presently manufactured by an industry through the incorporation of a new process or a different production method.

In the same way, many established industries are shown that they can readily make a new product at a greater profit with their present equipment.

THERE are times also when the availability of labor becomes quite a problem to present industries. In such cases, the area development department again acts as an intermediary, supplying information on the possibility of establishing vocational schools through the co-operation of the local public school systems. By this effort, reserves of trained labor can be developed for present industries. Through the local chambers of commerce, boards of trade, or other leading civic agencies, each community is urged to establish a manufacturers' council so that the knowledge of an individual industry's problems can be used to bring about a better understanding on the part of manufacturers in general.

There are many other ways in which assistance is supplied in developing

existing industries, but in most cases the situations are peculiar only to the specific industry involved at that time and, therefore, the methods used do not have a general application. This field of development of present industries is one of the most important projects which can be entered into by a public utility. Through a conscientious process of developing and enlarging those manufacturing units already established within the territory, a solid foundation can be provided which will ensure the future economic well-being and growth of any utility's area.

THE location and development of new industries are functions which are almost self-explanatory. They involve the solicitation of interest on the part of manufacturers throughout the entire United States in locating plants in central eastern Pennsylvania. There are many different categories of new industries, including the organization of new companies, branch plants, affiliated plants, etc. In this connection, constant effort is made to locate financially sound industries of proper diversification to guarantee constant and consistent payrolls throughout central eastern Pennsylvania.

Most of the work in the field of soliciting interest on the part of prospective new industries is done outside the state of Pennsylvania and outside of Pennsylvania Power & Light Com-



Q "THE success of any public utility in marketing its services depends entirely upon the prosperity of the territory it serves, and it can prosper only as the area prospers. Therefore, the prosperity of its franchised territory becomes a matter of vital concern to any specific public utility."

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pany territory. Generally, it is confined to an area bounded by the Mississippi river on the west, the Canadian border on the north, the Mason-Dixon Line on the south, and the Atlantic ocean on the east. This does not overlook, however, prospects located beyond these boundaries but indicates that the bulk of our work is with industries within the above-mentioned area.

The work in the company's territory consists of inspecting buildings and land sites, conferring and negotiating with community organizations, securing the full and complete co-operation of local and state government officials, etc. Every effort is put forth to determine exactly what types of industries are needed most in each community. In order to locate and satisfy the requirements of such industries, it is necessary to have access to complete data on labor supply and wages, raw materials, transportation facilities, availability of markets, power supply, fuel supply, taxation and taxation legislation, population characteristics, living conditions, facilities for housing industries, residential housing, sale and rental costs of industrial properties, banking facilities, and financial aid which is made available to new industry in certain cases and under various conditions by noncompetitive communities.

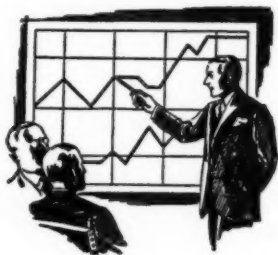
EFFORTS in the field of agricultural-industrial development are devoted to locating the types of industries which can utilize to a great extent the agricultural products grown in central eastern Pennsylvania or in turn manufacture products which are used to increase farm production and provide labor-saving operations for

the farmers within central eastern Pennsylvania. By locating new industries of these types, the over-all economic growth of the area will be well-balanced through the development of agricultural facilities as well as industrial facilities associated with agriculture. The farmer's income is increased while the job opportunities are also increased. The latter results in higher payrolls which in turn find their way into the commercial establishments of the area.

The development of summer-winter resort vacation land tourist business in central eastern Pennsylvania is confined to those areas which lend themselves most favorably for this purpose. Our work in this field is almost wholly promotional and is carried on through established agencies. We assist these agencies in preparing promotional literature and other materials and in putting on promotional campaigns for the sole purpose of developing this type of business.

THE very nature of area development work is in itself conducive of good public relations. People's opinions are developed by the unobtrusive influences about them—the things they read, the radio, what they hear others talk about, etc. These non-selling influences have a tremendous effect on people's unconscious desire to use the services of Pennsylvania Power & Light Company when they learn of the company's activities in the social betterment field. Certainly, successful area development work is social betterment of the highest order because everyone in every community benefits.

By endeavoring to level off the ups



The Effect of Area Development Policies

“AREA development policies and the matter of implementing them have a pronounced effect on the business life of many communities and the wide scope of these activities will play an important rôle in creating continued new job opportunities. Pennsylvania Power & Light Company believes in area development work from a humanitarian viewpoint and as a matter of good business, because a prosperous area means better living for more people and a fruitful market for the company.”

and downs of employment in central eastern Pennsylvania, Pennsylvania Power & Light Company is striving to avoid depressions so that all of the good things which our country's economic system produces can be constantly enjoyed by more and more people.

The work of the area development department is divided into four sections:

1. AN industrial development section, which devotes its entire time to the work of soliciting industrial prospects and in working with or in behalf of existing industries. This involves the contacting of industries in an effort to interest them in central eastern Pennsylvania as a location for the operation of prospective new plants and in the development of outlets for

products manufactured by existing industries as well as the disposal of their by-products. The work is very closely related to all the other sections of the department and the degree of success it obtains is dependent largely upon the co-operation of and with these other sections.

2. A COMMUNITY development section, which devotes its entire time to the development of communities in central eastern Pennsylvania. The personnel of this section work with the various civic agencies in the communities so that they are properly organized and ready to do business when industries are placed in contact with them for the location of new plants. This section also co-operates with the industrial development section by accompanying industrial pros-

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pects on inspections of industrial buildings and land sites throughout the company's franchised territory and arranging for conferences and negotiating meetings with the various groups in the communities. It is the responsibility of this section to collect information concerning the communities generally, available industrial buildings, land sites, etc. It is also this group which works with existing industries in assisting them in every way possible. In addition, all the field work necessary for the development of vacation, summer-winter resort, and travel business in central eastern Pennsylvania is solely the function of this group.

3. A RESEARCH and promotion section, which has the responsibility of providing promotional assistance for every phase of area development work. It develops, designs, and co-ordinates the preparation of various working tools and all promotional material to publicize the location advantages of central eastern Pennsylvania. It establishes and maintains appropriate direct mail lists of industrial executives with whom contact is maintained in accordance with schedules set up in each year's program. This section is also engaged in gathering the statistics and research material required by the other sections of the department. It screens, analyzes, and consolidates periodic data on wage and freight rates, population changes, labor availability, etc.

4. A CO-ORDINATING and detail section, which co-ordinates the work of all the other sections of the department. It is responsible for the keeping

of all records from which are prepared the weekly, semimonthly, monthly, quarterly, and annual reports, as well as other statistical information requested by other departments. This section is also responsible for maintaining the files for the entire department, including prospect follow-ups, building and site listings, community data sheets, community surveys, and other items of a general nature. All industrial building and land site listings are prepared by this section and distributed to members of the department, realtors throughout the northeastern part of the United States, prospects, certain company personnel, and others who might be interested in receiving such information. It assists in the preparation of correspondence, direct mail campaigns, and the distribution of promotional materials. Assistance is also given when necessary on prospect inspection trips in the territory and in contacting prospects for development purposes.

THIS briefly is Pennsylvania Power & Light Company's concept of area development. It is not a new one. It is simply a co-operative, grass-roots application of self-reliance in appraising and developing local resources. It rests on the fact that the economic interests of any area are interrelated and interdependent; it follows the American precept that the best way to get ahead is to use what you have and to do the job yourself. It seeks simply the creative environment in which local resources can be used to maximum local advantage.

As a corporate citizen in each of the communities where it does business, Pennsylvania Power & Light Com-

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pany feels that it has a responsibility for spearheading community betterment programs. Many local groups have tried to spearhead an area development program. Not infrequently it is done by service clubs, chambers of commerce, boards of trade, and other organizations of local merchants and business people. Sometimes local government unites with the merchants; less frequently industrial management and/or labor share the responsibility. Other local groups such as churches, schools, women's groups, etc., participate energetically but such agencies find it difficult if not impossible to provide the necessary leadership to guarantee satisfactory and successful results. Since community betterment and over-all area development is a continuing process, the leadership must be of a constant nature and not of such character that it is subject and vulnerable to chronic and changing economic conditions.

THE utility alone has an area-wide perspective. Local merchants not infrequently confine their efforts to their limited trading area despite the fact that the solution to their problems involved lies further afield and requires intercommunity co-operation. The utility alone has an organization of sufficient size, prominence, and diversification to provide continuity of

plan and purpose. Most area development programs fall apart for lack of area-wide facilities for research and field contact or because the prime mover dies, moves away, or loses interest. In a public utility organization there exists what it takes to keep such a program going steadily and throughout the area.

By its very nature, the utility has access to essential information and contacts not otherwise available. Most public utilities have in their files or can assemble with relative ease the basic data for many types of area development work. They know and deal constantly with the people at regional, state, and national levels whose help is essential for the success of any area development program.

Pennsylvania Power & Light Company accepts this responsibility of supplying leadership in area development work, because it believes this work is a source of income and good public relations. The company also is interested because it conscientiously believes that it has a responsibility as a corporate citizen. Perhaps another determining factor in Pennsylvania Power & Light Company's willingness to do this type of work is the fact that there is a realization that this work will be done regardless of who may supply the leadership and that it is



"It takes courage to tackle, and wisdom to help resolve, the complex problems of area co-ordination and reconstruction. It takes patience and all the tolerance that can be mustered; for if this development job is to be done democratically, the leader will have to stimulate others to work with him to the mutual advantage of all concerned."

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essential that this work be done within the framework of the American system of free enterprise.

It takes courage to tackle, and wisdom to help resolve, the complex problems of area co-ordination and reconstruction. It takes patience and all the tolerance that can be mustered; for if this development job is to be done democratically, the leader will have to stimulate others to work with him to the mutual advantage of all concerned. The utility helps people to learn to help themselves, and in time these same people will support a worth-while program to a very effective degree from the viewpoint of time, effort, and money. Once such a program is started, it becomes essential that the utility continue with it and stick to it so that, in time, the results in the form of increased industrial, commercial, and residential business will be most satisfactory. The customers of the utility, after a successful area development program has been in existence for some time, will be willing to testify that private enterprise can still do what needs to be done to keep our economy healthy without the intervention of government paternalism.

For example, in central eastern Pennsylvania—the 28-county area served by Pennsylvania Power & Light Company—since the end of World War II to and including Octo-

ber, 1952, because of the location of 679 net new industries, it is conservatively estimated that \$1,500,000 of new commercial and residential annual revenue has been added to the company's gross income. At the same time, industrial revenue has been increased by approximately \$6,000,000 annually. Then, too, the new employment of an estimated 55,000 workers with the additional annual payrolls of \$175,000,000 have contributed immeasurably to the strengthening of the basic economy of the area.

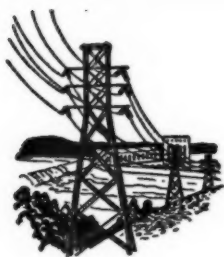
It is interesting to note, too, that after twenty-five years of activity in this field, there are now more than 192 communities interested in and set up with organizations to co-operate with Pennsylvania Power & Light Company in making this area development program an outstanding success.

Area development policies and the matter of implementing them have a pronounced effect on the business life of many communities and the wide scope of these activities will play an important rôle in creating continued new job opportunities.

Pennsylvania Power & Light Company believes in area development work from a humanitarian viewpoint and as a matter of good business, because a prosperous area means better living for more people and a fruitful market for the company.

“IN the ideals and purposes of education and business there must be increasing emphasis on moral and spiritual values. By their mutual acceptance of such values, education and business are inseparably bound.”

—DECHARD A. HULCY,
President, Lone Star Gas Company.



The Place of Hydro Power Today

Whatever direction the new Eisenhower administration takes, with respect to Federal power project development, a tremendous investment in such facilities already is an accomplished fact. This is an inquiry into the probable place of the hydro plant in the future of electric service in the light of both political developments and atomic energy.

By JOHN P. CALLAHAN*

RESEARCH for this article began in September, a pre-election month when former Illinois Governor Stevenson's chances for the presidency seemed at their brightest, suggesting the possible continuation of public power expansion. Since then, however, we have had the Eisenhower landslide, and the installation of a new Secretary of Interior, who talks about giving privately owned power companies an "even break," in his supervision of Federal power projects. We may yet see the Federal Power Commission, supported by Federal court decisions, once more in the business of authorizing private company hydro licenses.

All this constitutes a new outlook and, for the private industry, one of

at least guarded optimism for its future place in the nation's economy. But we must still reckon with the accomplished fact (at the expense of billions of taxpayers' dollars invested) that the Federal government is still very much in the power business, and likely to remain so for the indefinite future.

The advocates of public power at first beat the drum for hydroelectric generating systems. These same persons began a few years ago to blow the fife for steam-generating plants to complement hydro, especially when the latter suffered from water shortages, a vagary ignored in the early days of the New Deal.

Exactly what is the picture? What are the economics of hydro and thermal generating methods? Do the advances in steam generation put it

*For personal note, see "Pages with the Editors."

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in a more prominent place of consideration? What about the need for a dependable, steady source of power by mass production industries? Finally, what about atomic energy as a fuel source for thermal units?

THE picture of steam *versus* hydro, as far as the Federal government's rôle is concerned, became cloudy a few years ago when the staunch, insistent advocates of hydroelectric generation by the Federal government began to talk about steam power as a supplementary, dependable backstop for the crises threatened at low-water times. That was something one seldom heard of in the days when the Tennessee Valley Authority was expanding and when the Columbia river development was given impetus in the Northwest where the death knell of private power concerns has been sounding more loudly these past few years.

The reverberations are clashing in a cacaphony made the noisier by intra-industry feuds in and around the state of Washington over the issue of "selling out" to local public power interests.

The zealot-like enthusiasm for more and more government hydroelectric developments was heard repeatedly by the writer during the past decade. More than purely engineering considerations motivated the strategic switch to championing thermal development of electric power; there were extension-of-the-area-of-operation thoughts, too, in addition to the need for additional power requested by the Atomic Energy Commission.

Last summer observers were given a clear picture of the Tennessee Valley

Authority's plan to expand, despite the fact that it has exhausted all hydroelectric sources. As a matter of fact, the authority has drifted far away from its original multipurpose idea of flood control and navigation. In the words of its chief engineer, Clarence Blee, the TVA has turned to steam plants to produce electricity because "sufficient remaining water power is just not available to meet extraordinary demands imposed by defense industries."

Both he and John Oliver, TVA manager, told of tremendous power expansion plans. The Bonneville Power Administration also has appealed to congressional committees for funds to construct steam facilities to supplement Columbia river hydro power.

How things change! Twenty years ago, electric power was incidental to the authority's operation. It was a secondary purpose.

Now they say that while the construction program—an installed power-generating capacity of 9,600,000 kilowatts through 1955 — by its size may seem to overshadow some of the TVA's other activities, it is not all that TVA is doing—"not by a long shot," said Mr. Oliver who then talked briefly about fertilizers turned out by the TVA. All of which prompts the question: Then why make the observation? The answer is obvious: The TVA is conscious of its preoccupation with power.

Another point about TVA and steam: Mr. Blee said the authority "turned to steam to supplement the hydro system because of the growing demand for power. The hydro plants



Federal Hydro Picture Gets Steamy

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we now [early August, 1952] have under construction have a maximum capacity of about 75,000 kilowatts. It would require more than ten such plants (without steam) to meet the load increase of a single year." He might have added that completion of TVA plans would result in a ratio of two-thirds steam, one-third hydro.

THE TVA has been called upon by the Atomic Energy Commission for a very large increase in its power demands, and the authority is going ahead on plans for construction of three new hydro units in existing dams, twelve additional units at three of five steam plants that were under construction a year ago, and will break ground shortly on two new steam plant locations, one near Galla-

tin and the other near Rogersville, both in Tennessee.

As an example of just what the increase in power capacity will amount to, Mr. Oliver said that when all the units at Kingston steam plant are on the line, that plant will have about fourteen times the capacity of the Norris hydroelectric plant. A single unit at the Gallatin plant, he said, would have more than twice the capacity of Norris dam.

LAST June J. E. Corette, president of the Montana Power Company, brought out at the twentieth annual convention of the Edison Electric Institute in Cleveland, Ohio, the fact that the Federal government now operates, or has under construction, fifteen steam-electric plants that have no

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other reason for existence than the generation of electricity. TVA has nine hydro plants that are strictly for power; others—Hungry Horse, Canyon Ferry, and Clarks Hill, to name three—originally were authorized as multipurpose projects but now are power plants and nothing more.

Emphasizing the new thinking of public power advocates, Senator Lister Hill declared before the National Electric Consumers Conference in Washington, D. C., last May that the "power lobby" was trying to prevent the public agencies and co-operatives from building "steam-generating facilities that are essential for firming up seasonal hydro power to give steady, dependable service to their customers."

The Senator from Alabama foresaw an unending expansion of public power:

The only way to meet the present shortage of power and the huge demands of the next few years is to develop more and more of our hydro capacity. In this we have made a good beginning. We are blessed with an undeveloped hydro power potential of 88,000,000 kilowatts a year, almost five times the nation's total installed hydro capacity.

His words failed to take into account the fact that if all these ambitious plans came true, this nation would be surfeited with a most uneconomical network of federally controlled power, both in the electrical and the political sense of that word.

WHY is the government moving to more steam installations? According to the best informed utility men, here are a few of the reasons: First, in substantially every situation

some steam is necessary to get more out of any hydro development. An example of this is extant at Niagara Falls where, according to Federal Power Commission reports, it would take three kilowatts of steam for every kilowatt of hydro to get the highest use of the power.

In the Northwest, with its big reservoirs, and huge power potentials on the rivers, there is sufficient variation in stream flow between wet and dry years so that there is little need of steam installations there. However, the opposite fact is more pronounced on the Missouri river, and is definitely true in California where, even before development of all hydro potentials, steam has been turned to meet the vagaries of the weather.

Exploring the New England area, private power men found that only 500,000 kilowatts of hydro were left there. The Federal Power Commission said the potential cited by others as 3,000,000 was "utterly theoretical."

In the Southwest, the Southeast, the Middle Atlantic area, and in the Missouri valley, there are definite limits to government exploitation for electric power sites. However, unless there are legislative reversals of attitude, as some expect now, the blueprint stage will be passed soon, and at the end of a decade the propublic power crusaders will have accomplished more of their aim to expand and expand.

THE plain and simple fact is that politics is, or at any rate used to be, the answer to the drive for more and more hydro sites. But the day is at hand when dam sites are about exhausted.

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One foresighted member of the power and light industry had this observation to make recently:

The next New Deal this country has will find itself faced with a situation in which it will have to get land for the land-starved people. It may seem incongruous now, but if the expansion of government power programs continues, there will be a campaign to drain the dams. The economic value of TVA land will be greater than the economic value of power produced in the flooded land.

Look at Europe. There is no such project as TVA because no nation can afford to devote agricultural land to dam sites. Yes, the day may come when people who want farm lands will vote for a candidate who will promise to return the fertile earth to its God-intended purpose.

Admittedly, there would seem to be question about the general future of hydro; too many factors prevail as permanently decisive reasons why, in certain areas, steam would be prohibitive. Location of proposed sites and distances from fuel sources are major ones.

BUT there are other current factors which augur well for the opposition to more Federal expansion. First, one can be inclined to expect a less sympathetic congressional attitude toward the spending spree of public power agencies. Secondly, there also was a vague indication of President Eisenhower's thinking in his statement made during an October campaign speech in Knoxville when he said that while he looked favorably on TVA accomplishments, he thought new projects should be developed under a system of Federal-state co-operation. Well, at least he didn't talk

about expansion of authorities. Third, the new Secretary of the Interior, Douglas McKay, voiced opposition to the Columbia basin development, something Secretaries of the Interior haven't done in the years since 1933.

Discussion of the costs of hydro and thermal methods of generating electricity is dependent on factors that include location of power-generating site, the cost of coal (up from \$3.40 to \$6.05 a ton since 1940), and efficiency of fuel.

ONE final, but important word about the limitations of hydro, this from William F. Wyman, president of a New England utility, the Central Maine Power Company:

As of today, the company [Central Maine] has forty-four generating plants with total rated capacity of 295,467 kilowatts. Approximately 65 per cent of this capacity is hydro and from this source under present load conditions the company normally obtains about 70 per cent of its total output.

The company endeavors to maintain proper balance as between thermal and hydro capacity. It should be particularly noted that the proportion of thermal capacity has increased in recent years and will further increase in the future. The company expects that additional developments of water power will play an important part in meeting future requirements and plans on developments of this type.

But he adds this important phrase: "... where they can effectively be made and are economically feasible," and continues:

With this increase in amount and use of fuel-burning capacity the amount and availability of hydroelectric energy represented in unused surplus has been reduced almost to the vanishing point. This is in distinct con-

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trast to the situation which existed some years ago.

MR. WYMAN, commenting on the more general aspects of water-power development, said many of the statements made about it "greatly exaggerated questions such as where, when, and under what circumstances it can be effectively developed," and added:

First, water power of itself is not the complete answer and must be supplemented by a proper amount of thermal capacity. This is particularly true of many of the remaining undeveloped sites which can only be justified at present construction cost levels by reason of peaking capacity in addition to output itself.

Proper recognition of this point clearly would show that while further developments have their place in the future they must be co-ordinated with future load shapes and other generating sources. This necessarily means a gradual process of fitting water-power developments into the picture and no overnight rush with many large projects. To do otherwise is simply disregarding the economic facts behind it.

Mr. Wyman cited another point of exaggeration: That water power is synonymous with cheap power. "Costs to construct have risen just as have other costs and not all sites with all factors properly considered can meet the test of competition with thermal capacity."

But the greatest exaggeration, he concluded, comes when water power becomes associated with government ownership and operation. "Unfortunately," he said, "it is the altogether too common practice to compare the prices at which the service is sold to customers without any regard to the

cost side, including many concessions and subsidies attached to ownership and operation by the Federal government."

ANY discussion or reference to cost of steam and hydro generation today also has to include a reference to atomic reactors. Where we recently spoke of power generation by atomic energy as being a decade or two away, no less an authority than Dr. Charles Allen Thomas, chemist president of the Monsanto Chemical Company, told the annual meeting of the National Academy of Sciences on November 10th in St. Louis, Missouri, that commercial production of electric power from atomic reactors may be "no more than four or five years away." Expanding on the discussion Dr. Thomas said:

We anticipate the possibility of newly designed reactors, similar in some respects to those now in use, that will simultaneously produce plutonium for the atomic stockpile and electric power for civilian and industrial consumption. These newly designed reactors will make use of enormous heat that is generated in splitting the atom—the equivalent of 25,000,000 kilowatt hours per kilogram split, which, incidentally, is now wasted.

(His paper was read in his absence.)

To sum up: The future of hydro power is, of course, limited by variables. But atomic energy, plus the inevitable cyclical change, this time away from Federal expansion under the influence of a new, more conservatively inclined administration, plus greater efficiency of fuels and high-cost construction, combine to indicate that that future has past.



Washington and the Utilities

Cost Valuation Rebellion Reaches FPC

DURING the past three months the highest courts of three different states have ordered their respective regulatory commissions to give some consideration to reproduction cost in fixing rate bases upon which to predicate the rate of return. This sort of thing, of course, is still official heresy at the Federal Power Commission, which has long raised the standard of strict adherence to the net investment rate base (original cost less depreciation). The rebel states are Illinois, Maine, and Maryland, although in the case of Maryland it was the commission that went along cheerfully. While all three decisions involved Bell telephone rate cases, there is evidence that a basic rebellion against a strict cost rate base has at least touched the very stronghold of the FPC, in a controversy between the FPC staff and one of its examiners.

Of course, the natural gas pipeline companies, with their heavy involvement in a much higher percentage of bonded indebtedness than either the telephone or electric industries, might not be too enthusiastic about casting adrift entirely from some kind of a foundation for a cost rate base. Even though highbrow economists insist that the traditional long-range trend in prices is upward, ever upward, pipeline company executives well know that it would not take much of a protracted dip in price levels to make a company with 80 per cent bonded indebtedness have nightmares of receivership if cost were ignored.

But, be that as it may, those who took in the hearings at the Federal Power Commission were well paid in excite-

ment during sessions on the Panhandle Eastern Case, January 29th, during the examination of expert witness Edward Falck, and January 30th during the examination of expert witness C. H. Hinton. The question was simply this: Does the FPC dictate policy or have the right to control the introduction of evidence before trial examiners? A clash between FPC counsel and Trial Examiner Emory J. Woodall threatened to bring this issue to a head. Woodall takes the position that, under the Administrative Procedure Act, trial examiners are free to determine the propriety and admissibility of evidence, even though it be of a nature which FPC staff insists the commission has excluded in previous cases. The controversy arose in a hearing involving gas transmission to the middle western states by the Panhandle Eastern Pipe Line Company.

THE pipeline company sought to introduce testimony showing that, during the past decade, pipeline companies have gradually been forced to go out of the gas production business, because of the commission's strict adherence to an original cost standard, as compared with average field prices of gas production. FPC counsel indignantly demanded that such evidence should be excluded, and filed an appeal with the commission when the examiner overruled him. It is understood that this appeal has since been denied. Exchanges between trial counsel and the examiner were described as warm and may well require a showdown before the commission, with the possible results of an upheaval of the well-disciplined rate case procedure which the FPC staff has been so keen on preserving.

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Trial Examiner Woodall was forthright in his refusal to be bound by past decisions of the commission.

"Who fixes policy in the law-making job of the United States?" Woodall demanded. "The Congress does; not this commission."

In the hearing of the two-year-old rate increase application of the Panhandle Eastern Pipe Line Company, FPC Counsel Robert Russell attempted to block admission of testimony based on prevailing field prices of gas. Involved in the controversy is the question as to whether the FPC will recognize the validity of the conservation laws of Kansas and Oklahoma which allow the prevailing field prices for natural gas. Overruled by Trial Examiner Woodall, Russell moved to appeal the decision to the commissioners of the agency. Since 1941, the Federal Power Commission has adhered to a theory of rates based on original cost, to the extent of excluding other evidence.

THE average price allowed pipeline companies for their own gas delivered to their pipeline is around one-half cent, or less, per thousand cubic feet, as compared to from 7 cents to 11 cents allowed for gas delivered to the pipeline by independent producers. As a practical matter, the state of Kansas has set a minimum price of 8 cents, and Oklahoma 11 cents, as conservation measures. But the Federal Power Commission did not recognize state minimum prices for rate purposes in the Northern Natural Gas Case, 95 PUR NS 289, although it did agree to consider the same. (This was a point brought out by Panhandle Eastern's counsel, Harry Littman, who made astute reference to the individual commission opinions calling for substantial supporting evidence.)

During recent years, according to witnesses, the older natural gas companies, which are under jurisdiction of the Federal Power Commission, have transferred many of their reserves to newly formed companies. This practice has come to be known as "spanning off" gas reserves. The newer gas companies rely

wholly on purchased gas and have no reserves of their own.

Proponents of the fair field price theory of regulation argue that this would provide an incentive to gas companies for exploration and development and would result in more economic and more reliable service to interstate consumers.

Ike the Boss

PRESIDENT Eisenhower's thumping big House majority (389 to 5) on reorganizing government agencies is a tribute to his prestige as the national leader. Despite a lot of firecrackers and off-the-mouth opposition to changing the previous plan for government reorganization to a veto of a simple majority of Congress, the opposition virtually disappeared on the final vote. This is all the more astonishing in view of the sliver-thin majority of the Republicans and the fact that Ike did not come out screaming when the committees of both chambers tried to cut down his reorganization powers. He just let it be known that he wanted at least as much power as Truman had had; and both sides of the aisle stood up and said Amen.

It is all the more interesting because the vote was taken on the day following Eisenhower's State of the Union message and this message has a significant meaning for the public utility industries—both gas and electric, and, by indirection, the telephone industry. On the surface, the President's long message was better reading than hearing. But this was because it was jam-packed full of carefully reasoned and consistent policy proposals, both foreign and domestic. It is obvious that, after a few fumbles in the opening plays, the new administration is performing as a team. Eisenhower's message was no collection of piecemeal opinions, however excellent in individual detail. It had a quality of cohesion which made what Ike had to say about "natural resources" worthy of study.

AND what did Ike have to say? The President called for a "strong Fed-

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eral program in the field of resource development." His qualifications, however, are especially noteworthy: (1) "Major projects," he said, "should be timed, where possible, to assist in leveling off peaks and valleys in our economic life."

(2) They should not "result from exclusive dependence on Federal bureaucracy." (3) He called for a "partnership of the states and local communities, private citizens, and the Federal government, all working together." (4) He wants more emphasis on "upstream (water) storage." (5) He conceded the justification of criticism of overlapping Interior Department activities.

It is possible, from this message, to project Eisenhower's program for resource development. These ideas mesh at every point with the frank testimony already given by Interior Secretary McKay. They indicate a close concurrence and understanding between McKay and the Chief Executive. The message suggests that Eisenhower is not against new Federal projects, but would prefer to save them for a "rainy day," from the standpoint of the nation's economy and employment. Moreover, he wants more state and local participation, including private enterprise. This checks with McKay's statement recently that he was not necessarily opposed to Hell's Canyon dam, but regretted that it had deteriorated into a political football between public ownership and free enterprise advocates.

DEPA, ESA, and OPS Closing Shop

THE most anxiously awaited pronouncement in the field of domestic government policy was President Eisenhower's statement on the end of price-wage controls and the limited continuation of material controls. Within two days the administration moved swiftly to back up the President's remarks by scaling down the old defense organization. The Defense Production Administration, which has just about completed its issuance of accelerated tax amortization certificates for defense plants, was

abolished. It was telescoped into the top level of the Office of Defense Mobilization, and a good many Washington observers were frank to say that this particular merger should have been ordered long ago. The absorption of the Economic Stabilization Agency into the ODM necessarily followed from the scuttling of its two operating subagencies, the Office of Price Stabilization and the Wage Stabilization Board.

Thus the old 3-layer, double-arched structure which ex-President Truman established when he created the emergency defense organizations fades into a questionable page of history. One side of the arch, ESA, was shot away completely. The other side shakes down to a simple ODM as the top boss of the operating material control agencies, notably the National Production Authority.

Further reorganizations may be in store for the material control agencies having direct charge of public utilities—the Defense Electric Power Administration and the Petroleum Administration for Defense—still under the nominal control of the Secretary of Interior. It seems clear from the President's speech, however, that limited material controls will continue, at least until the end of the fiscal year, and quite likely beyond that.

OFFICE OF PRICE STABILIZATION officials and legal staff met this month to "decontrol" petroleum and natural gas wellhead prices. The petroleum and natural gas section of OPS is one of the few remaining that has any major indirect control over utilities or direct control over natural gas wholesale rates. This OPS action was taken in the wake of the President's State of the Union message.

Question has arisen as to whether OPS lawyers may stay on the job for the duration of rate cases now in process. OPS has intervened in the following cases, among others, before the Federal Power Commission: Panhandle Eastern Pipe Line Company, El Paso Natural Gas Company, and Tennessee Eastern Transmission Corporation. Chances are the lawyers will be cut off.

Exchange Calls And Gossip



Maine Court Orders New Rate Hearing

THE Maine Supreme Court has ordered the Maine Public Utilities Commission to reconsider an 18 per cent boost in charges, denied last May, for telephone services within Maine. The New England Telephone & Telegraph Company claimed that when the commission denied the boost it was in error on ten points. In a 28-page opinion, the court upheld the company on all ten points. Justice Thaxter, who wrote the opinion, said commissions "have no right to take short cuts across the rights of others . . . to reach popular results."

The court agreed with the company that the commission was in error in forcing the company to provide service which did not yield a fair return on its investment in the necessary facilities; refusing to let the company take current costs into consideration in figuring a rate base which would provide it a fair return for the service supplied; refusing to let the company take rising costs and increased valuations into consideration to prove need for higher rates; not properly evaluating evidence produced to show decline of net earnings; and improperly excluding certain expenses for services within Maine.

West Virginia Rate Boost

THE Chesapeake & Potomac Telephone Company has been granted the full amount of a rate increase request by the West Virginia Public Service Commission. The new rates authorized by the commission will bring the company \$550,000 in additional annual in-

come. The boost, effective February 1st, added 10 cents to the monthly bills of residential subscribers, and 15 cents to those of business subscribers. It was the sixth rate increase action the commission has taken with respect to Chesapeake & Potomac since the end of World War II.

In granting the request, the commission noted that the company had spent more than \$6,000,000 on new construction last year, and is planning \$10,000,000 in further expenditures during 1953.

"Antigambling" Legislation Proposed

USE of telephone and telegraph, or other interstate communication media, to transmit gambling information would be prohibited under the provisions of three bills introduced in the Senate. The bills are sponsored by Senator Tobey (Republican, New Hampshire), chairman of the Interstate Commerce Committee, and Senators Wiley (Republican, Wisconsin), Hunt (Democrat, Wyoming), and Kefauver (Democrat, Tennessee). All three bills were reported favorably by the Interstate Commerce Committee in the last session of Congress.

S 716 would prohibit the importing, transporting, and mailing of gambling materials, the broadcasting of gambling information, the transmission of bets or wagers by means of interstate communications, and the transportation of gambling devices in interstate commerce. S 718 would "provide for the licensing of certain persons engaged in the dissemination of information concerning . . . racing events and betting informa-

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tion . . . by means of interstate and foreign communications by wire or radio . . ." S 717 would "make unlawful the transmission in interstate commerce of gambling information concerning a sporting event which is obtained without consent of the person conducting such sporting event."

These measures were all sponsored in the 82nd Congress by the Special Committee to Investigate Organized Crime. At that time, telephone companies were not satisfied that the language of the bills would exempt them from oppressive penalties in the course of carrying out their public utility operations and fulfilling their service responsibilities to their subscribers. Communications carriers are expected to seek clarifying language when hearings on the bills begin before the Senate Interstate Commerce Committee.

Phone Union Dispute Taken to Court

THE Telephone Employees Union and its parent group, the United Telephone Organizations, have filed papers in the New York Supreme Court seeking to enjoin each other from electing officers until differences between them are settled. Intraunion squabbling arose from the recent ouster from the Telephone Employees Union of Louis Hennigan as a member of the executive committee of the United Telephone Organization. The parent body is an unaffiliated union representing 17,000 plant workers of the New York Telephone Company in the metropolitan area.

It was on the basis of Hennigan's disputed position that the telephone employees asked for the injunction. On the other hand, the parent group sought the injunction on the grounds that the TEU allegedly held a fraudulent referendum last fall on an amendment dealing with the election of general officers. Hennigan contended that his objections to the allegedly fraudulent votes led to his ouster.

After submission of the dispute to the court, Joseph T. Broderick, general

president of the UTO, criticized "the wholly inaccurate statement which has appeared in the public press to the effect that in the impending elections of the general officers of the union, the composition of the winning slate would determine whether the organization enters the Communications Workers of America, CIO, or remains independent." Broderick denied that he favored affiliation with the CIO, as reported in the press. He declared that "we are opposed to any type of affiliation and we advocate remaining independent," because the union had done an effective job as presently set up and the overwhelming majority of its members did not want such affiliations. He said he had "vigorously resisted raiding by other groups."

"IT was asserted in the news story," Mr. Broderick continued, "that Thomas Eaton, my alleged rival for the presidency of the UTO, was challenging my re-election upon the ground that I was pro-CIO. At the meeting of the board of directors of the UTO on January 30th Mr. Eaton disavowed any responsibility for the newspaper story.

Calling the amendment vote fraudulent, Mr. Broderick said the question of CIO affiliation was "conjured up by Mr. Eaton . . . to cover up the manner" in which the vote was held. He asked the court to designate either the Honest Ballot Association or the American Arbitration Association to supervise a new vote.

Rhode Island Rate Counsel

GOVERNOR Roberts of Rhode Island has ordered the special state counsel assigned to the utilities division, Francis J. O'Brien, to represent the division or utility consumers in rate cases, including appeals up to the state supreme court. The question grew out of concern expressed by the Rhode Island Supreme Court over the lack of appearance before the court to give the general public representation in the New England Telephone & Telegraph rate case.

EXCHANGE CALLS AND GOSSIP

Five justices of the court queried Assistant Attorney General Archie Smith on the appearance of counsel in such cases. Smith told the court that O'Brien was assigned to represent the public at rate hearings, but took no part in appeal proceedings.

The case came to the court on two appeals, the company seeking more than the \$1,168,000 additional annual revenue which Public Utility Administrator Thomas A. Kennelly allowed last September, and Thomas H. Gardiner, an attorney, appearing in his own behalf as a consumer in opposition to the increase as excessive.

Smith, acting for Attorney General William E. Powers, had filed a nonpartisan brief saying that Powers' duty in the matter was of a formal nature. That failed to satisfy the court, and Smith, who had left the court, was summoned by the judges for questioning.

California Rules on Hotel Phones

THE California commission last month issued special orders outlining rules and regulations for telephone service furnished through switchboards to hotels, apartment houses, clubs, and other establishments having private branch exchange service. The order provides that such service may be furnished under the following alternative conditions—at the option of the subscriber:

(a) The subscriber may charge guests, etc., not to exceed 10 cents for each local exchange or zone message, provided no charge is made in addition to the prescribed tariff rate for multmessage unit and intrastate toll messages; or (b) the subscriber may charge guests, etc., not to exceed 15 cents for each local exchange or zone message, and for each intrastate toll or multmessage unit message an additional charge of 10 cents where the tariff charge is 50 cents or less, 15 cents where it is 51 cents to \$1, 20 cents where it is \$1.01 to \$2, and 25 cents where it is over \$2, provided the subscriber posts a schedule of such

charges in a conspicuous manner and location adjacent to each guest room telephone which contains the statement, "These charges are included at the option of the hotel management and do not exceed legally authorized charges."

AT&T Protests Movie TV

THE American Telephone and Telegraph Company has registered opposition to the motion picture industry being granted special channels to show television in theaters.

The Federal Communications Commission early this month heard E. D. North, general attorney for the Long Lines Department of AT&T, express the Bell system's position in the case. He declared it is clear the theater interests want an exclusive allocation and also want the use of bands now allocated to common carriers.

Such a procedure, Mr. North maintained, would be restrictive and would narrow the use of the spectrum. He said frequencies now allocated for common carrier use are available to all the public for any form of such service—telephone, telegraph, radio program transmission, or television program transmission.

Mr. North contended it is not necessary for the FCC to allocate frequencies to obtain theater television service. Television now is being furnished for theater screens, he explained, and present AT&T facilities are capable of handling this business. He made it clear his company is not opposed to theater television, adding it has co-operated with the theaters for several years.

Frank A. Cowan, engineering staff manager of the Long Lines Department, also appeared.

On the national level, such special charges made for telephone switchboard services in hotels were recently decontrolled by the Office of Price Stabilization. This action was taken by amending General Overriding Regulation 14. The amendment went into effect on February 4, 1953.



Financial News and Comment

By OWEN ELY

Changing Trends in State Regulation

To be a successful investor in utility stocks, one must pay close attention to varying regulatory policies in the different states. Such policies have much to do with the earning power of utilities, particularly these days when large amounts of equity capital must be raised. Thus, the popularity of Texas stocks such as Houston Lighting, Texas Utilities, Southwestern Public Service, and Central & South West may be due not only to the rapid growth of the area, but also to the impression that, because the state law permits a return up to 8 per cent, and there has been no state regulation, earnings prospects are good.

In Iowa, there has been no commission, and some utilities have been earning a fairly high rate of return if calculated on an original cost rate base. (Significantly, utilities in this state have not excited any exceptional market popularity.) In Minnesota also the gas and electric utilities have not been regulated by a state commission. Of course, where there is no state commission the municipalities retain regulatory powers but as long as there is no political agitation against the utility, or no special issue has arisen, regulatory problems are at a minimum.

However, the number of states without full-powered commissions is narrowing. In recent years Delaware and Florida have installed commissions and there

has been talk for some time of creating one in Iowa. In Texas a three-member elected public utility commission has again been proposed. Representative Robert Patten of Jasper recently introduced a bill to give the proposed new agency statewide regulatory and rate-making powers over electric, telephone, and natural gas utilities. The commission's expenses would be paid by the companies and prorated on annual business. If these plans materialize, Minnesota, South Dakota, and Mississippi would remain the only states without commissions to regulate electric utilities.

WHILE some of the gaps in state regulation are thus being filled, the commissions in general appear to be displaying a more liberal and less legalistic attitude toward rate regulation, perhaps in recognition of the utility problems in financing a tremendous expansion program. The New York commission has

DEPARTMENT INDEX

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eased its former antiutility policy, though it still fails to recognize fair value by giving any weight to cost of reproduction; a slight concession to inflationary pressures has been indicated in fixing rates of return.

In some other states where commissions have followed a restrictive policy (such as Illinois and Maine) they are getting directives from the state courts to adopt a more liberal viewpoint. Thus, the rather oppressive 1951 decision of the Illinois commission denying any rate increase to the Illinois Bell Telephone Company was recently set aside by the state supreme court, with instructions to give adequate weight to cost of reproduction in arriving at fair value. In a Maryland telephone case (Chesapeake & Potomac Telephone Company of Baltimore City) the court of appeals held likewise, although the commission had, in that case, given some consideration to present fair value.

THERE has been an interesting development in Ohio, which has enjoyed the distinction of being the only state with legislation directing the utility commission to use cost of reproduction (less depreciation) as the rate base. In the recent gubernatorial contest, Charles Taft (left-wing Republican) urged that the law be modified. Democratic Governor Frank Lausche, running for his fourth term, also indicated that he favored a change. In the past, bills to accomplish this purpose had never gotten out of legislative committee.

On January 12th, re-elected Governor Lausche made an address before the 100th general assembly of Ohio in which he characterized the utility law as "archaic, obsolete, and unjust. . . . There is a school of experts on utility valuation which advocates that for rate-making purposes the property be given a value equal to its original cost. Such a rule, while it would eliminate the laborious and costly task of establishing the reproduction value of property, would also, in my opinion, lead to inequitable results because the original cost of the property might not have any true relationship to

its present value. In my opinion, between these two inequitable rules there is a middle way, a golden mean.

"The rule in Ohio should be changed and brought into some conformity with the rule in the forty-seven other states. It should provide that a utility company in Ohio shall be allowed a reasonable return on the *fair value* of its property, which value is to be determined by a consideration of its original cost, reproduction cost new less depreciation, and such other testimony having a relevant relationship to the fair value of the property."

It appears likely that, if the governor's wishes are carried out, Ohio will remain a "liberal" state somewhat like Pennsylvania. However, unless administrative changes in the law are also effected, the regulatory machinery in the state may prove cumbersome and slow—the municipalities retaining their initial control over residential electric rates, the commission hearing appeals, and the courts acting as the final referees.

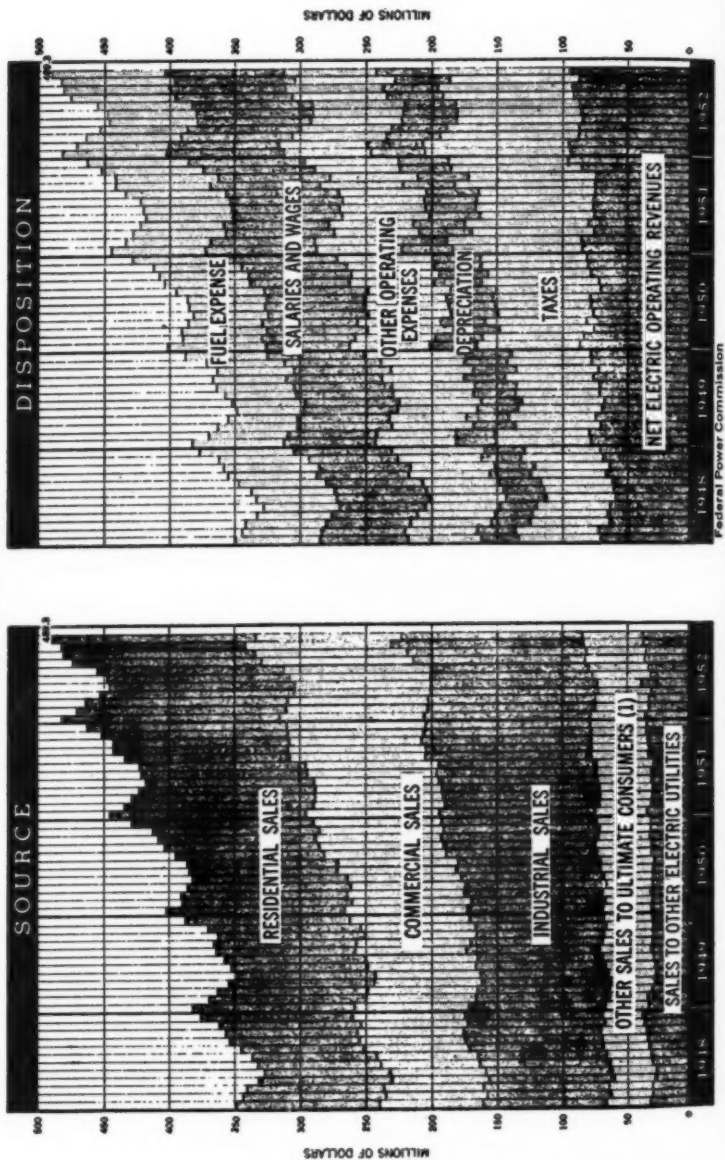
"Monopoly" in Investment Banking Has Virtually Disappeared

THE Department of Justice in October, 1947, filed a civil complaint against Morgan Stanley & Co. and sixteen other firms, as well as the Investment Bankers Association, alleging a conspiracy to monopolize the business of underwriting and offering new security issues, in violation of the Sherman Act. The department has now presented its evidence in some 18,600 pages of testimony and legal debate, plus innumerable exhibits—the whole occupying about 14 feet of bookshelf space.

Paul L. Howell, associate professor of finance in New York University, gave an address December 29th before the annual convention of the American Finance Association at Chicago, which was published in the *Commercial and Financial Chronicle* of January 1st. It may be of interest in connection with utility financ-

CLASSES A AND B PRIVATELY OWNED ELECTRIC UTILITIES IN THE UNITED STATES SOURCE AND DISPOSITION OF ELECTRIC OPERATING REVENUES

NOVEMBER



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ing to present a brief résumé of the article.

Judge Medina has dismissed the charges as to the IBA, and has limited the introduction of evidence to the period following 1935. The government's contention centers around three main practices or concepts which are alleged to restrain competition: (1) the advantage enjoyed by the "traditional banker"; (2) the vested right to a "historical posi-

tion" in an underwriting syndicate; and (3) reciprocity in underwriting participation among the defendants.

Mr. Howell characterizes the government's evidence as "rather intangible, subtle, vague, circumstantial, and inferential, often hearsay in nature." He also maintains that new practices and new underwriting techniques have developed during the past decade, such as the growth of internal financing through re-



LIST OF BROKERS' UTILITY ANALYSES*

<i>Company Analyses</i>	<i>Firm</i>	<i>No. Pages</i>	<i>Issued</i>
Arkansas Natural Gas	Spring, Stewart & Co.	2.....	Jan.
Brazilian Traction Light & Power	Franklin, Cole & Co.	6.....	Jan.
Central Illinois Light	Paine, Webber, Jackson & Curtis	2.....	Dec.
Central Public Utilities	Troster, Singer & Co.	2.....	Oct.
Consolidated Natural Gas Co.	Argus Research Corporation	2.....	Jan.
Detroit Edison Company	Paine, Webber, Jackson & Curtis	4.....	Feb.
Florida Power & Light	Paine, Webber, Jackson & Curtis	2.....	Jan.
General Public Utilities	Argus Research Corporation	2.....	Jan.
General Telephone Corporation	Carl M. Loeb, Rhoades & Co.	2.....	Jan.
Houston Lighting & Power	Paine, Webber, Jackson & Curtis	2.....	Dec.
International Tel. & Tel.	Paine, Webber, Jackson & Curtis	8.....	Dec.
Iowa Southern Utilities	G. A. Saxton & Co.	1.....	Nov.
Iowa Southern Utilities	Kidder, Peabody & Co.	3.....	Jan.
Kansas City Power & Light	Paine, Webber, Jackson & Curtis	2.....	Jan.
Laclede Gas	Josephthal & Co.	2.....	Jan.
Middle South Utilities	Argus Research Corporation	6.....	Dec.
Minnesota Power & Light	Paine, Webber, Jackson & Curtis	2.....	Feb.
Montana Power	Paine, Webber, Jackson & Curtis	2.....	Jan.
New York State Electric & Gas	Argus Research Corporation	2.....	Dec.
Niagara Mohawk Power	Paine, Webber, Jackson & Curtis	3.....	Dec.
Pacific Gas & Electric	Argus Research Corporation	2.....	Nov.
Pacific Power & Light	G. A. Saxton & Co.	1.....	Jan.
Panhandle Eastern Pipe Line	Argus Research Corporation	4.....	Jan.
Public Service Co. of Indiana	Paine, Webber, Jackson & Curtis	2.....	Jan.
Southern California Edison	Sutro & Co. (San Francisco)	2.....	Dec.
Standard Gas & Electric # }	Goldman, Sachs & Co.	2.....	Jan.
Standard Power & Light # }			
Standard Power & Light	Sutro Bros. & Co.	2.....	Jan.
Union Elec. Co. of Missouri	American Securities Corp.	13.....	Feb.
Wisconsin Pub. Serv. Corp.	White, Weld & Co.	20.....	Nov.
Wisconsin Pub. Serv. Corp.	First Boston Corporation	10.....	Nov.

Tabulations and Miscellaneous Bulletins

Monthly Bulletin on Current Developments in Utilities	Eastman, Dillon & Co.	10.....	Jan.
Monthly Review of Utility Developments	Josephthal & Co.	4.....	Jan.
Electric Utilities in 1953	Shearson, Hammill & Co.	6.....	Jan.
Electric Utility Trends	Thomson-McKinnon	4.....	Feb.
Public Utility Common Stocks (Tabulation)	R. W. Pressprich & Co.	5.....	Nov.
Public Utility Common Stocks (Tabulation)	G. A. Saxton & Co.	2.....	Dec.
Electric & Gas Utility Common Stocks (Tabulation)	First Boston Corporation	11.....	Dec.

*Similar lists have appeared in the issues of December 4, October 9, July 17, April 24, and January 31, 1952, as well as in preceding years. # In "Investment Comment."

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tained cash, private placements with institutions, commission requirements as to competitive bidding, and issuance of convertible bonds and "rights" equity financing without underwriting in all cases.

He concludes that these have so narrowed the field by excluding the bankers or by sharpening competition, that the area left to monopolize is almost negligible."

MR. HOWELL discusses in detail the government's charges as to price-fixing in security syndication, and quotes Justice Brandeis and the SEC. He points out that even the government witness, Harry Stuart of Halsey, Stuart & Co., testified that it is necessary to have a fixed public offering price to facilitate high-speed distribution.

Many companies now rely largely on internal financing of construction by using retained earnings, depreciation accruals, etc. Thus, during the period 1946-51 Department of Commerce and SEC figures show that net new capital raised through the securities markets amounted to only 15 per cent of postwar capital requirements. "The investment banker is ruthlessly supplanted by competitive forces in today's dynamic post-

war capital market. Secondly, there is competition from direct financing by institutions." During the period 1946-51 about 37 per cent of corporate security issues were placed directly, 35 per cent of the bids going to life insurance companies. Thus Union Carbide last year arranged a highly unique financing program with institutions—to borrow \$300,000,000 over a 100-year period.

HAD it not been for the adoption of competitive bidding rules by the SEC, the ICC, the FPC, and some of the state commissions, it is probable that the insurance companies would have taken over the business almost entirely through private placement, Professor Howell concludes.

A study of the history of competitive bidding indicates that it is highly competitive; in the case of one utility bond issue 14 bids were received. At times such bidding may even be termed "cutthroat," since the profits of the successful bidder are hardly adequate to meet overhead expenses, let alone take care of market risks.

He also points to the fact that many old-line banking houses have disappeared through merger and liquidation, such as E. B. Smith, Bonbright, Kissel, Kinne-cutt, and Speyer, while new ones such as Kidder, Peabody, Merrill Lynch, and Halsey, Stuart have risen to the top. He concludes that the Justice Department might have had a better chance if its case had been prosecuted twenty years ago—there is little real evidence since 1940 to support its contentions. The now widespread practice of public sealed bidding has increased competition and established competitive prices and spreads for high-quality securities of regulated companies, eliminating the "traditional banker" for railroads and for many utilities, while industrial companies now do only limited financing, largely arranged with institutions. As to syndicate pricing policies, these constitute a legal operation since they are not forbidden by Congress, and their elimination would increase underwriting risks and the cost of flotation, Professor Howell contends.

*UTILITY NEW MONEY FINANCING (In Millions)			% In- crease Over 1952
	January		
<i>Electric Utilities</i>			
Bonds	\$ 47	D 36%	
Preferred	43	115	
Common	73	121	
	<hr/> \$163	<hr/> 29%	
<i>Gas Utilities</i>			
Bonds	\$ 20	D 68%	
Preferred	3	—	
Common	3	—	
	<hr/> \$ 26	<hr/> D 58%	
Total	\$189	(No change)	

*As compiled by the Irving Trust Com-
pany. D-Decrease.

Atomic Power—Is It Economic And When Will It Be Realized?

FORECASTS regarding the date when atomic power will become commercially available remain about as vague as during early postwar discussions, despite the great amount of research in recent years by the AEC and a number of utility-industrial "teams." Much of this mystery is, of course, due to AEC censorship over research results. Also, Congress may have to modify the AEC monopoly ownership of fissionable materials and reactors, and issue new directives on policy, before the utilities can really grapple with the problem.

Attempts to gauge the cost of generating electricity through atomic fission also remain "guestimates" at best. Dr. Walter H. Zinn, director of the AEC Argonne Laboratory (see *Nucleonics* for September, 1952), indicated that natural uranium may cost only about \$35 per pound, and that since one pound when completely used up in a breeder reactor has the heat equivalent of about 1,300 tons of coal, obviously the fuel cost of generating electric power is quite negligible. But President Walker L. Cisler, of the Detroit Edison Company, in an article in the February *EEI Bulletin*, referring to the Dow Chemical-Detroit Edison team project, says:

The problems to be solved before such a reactor can become a commercial reality involve the coolant system needed to recover the heat released in the reactor, the processing of the fissionable material produced by the reactor, and the manner in which numerous chemical and metallurgical requirements can be met.

CONSOLIDATED EDISON's expert, Ward F. Davidson, in an article in the Edison house organ *Around the System* for February, emphasizes the costs of chemical reprocessing of the atomic fuel. The necessity of doing much of this maintenance by "remote control" adds greatly to the cost. The recent breakdown of the big Canadian atomic energy plant points

up this maintenance problem. All authorities seem agreed that over the near-term future, at least, the cost of electricity would be prohibitive unless the Federal government stands ready to buy the by-product plutonium at around present production costs, for use in the making of bombs.

President McAfee of Union Electric Company of Missouri, which has "teamed" with Monsanto Chemical in another research program, pointed out in a recent talk before the New York Society of Security Analysts that the development of the new process must doubtless follow the same tortuous engineering progress as did the original development of coal as fuel to generate electricity. In the beginning it took as much as forty pounds of coal to produce one kilowatt hour—now only two-thirds or three-quarters of a pound is necessary. The difference has been due mainly to technological progress in developing all sorts of auxiliary apparatus.

Alaska Gas, Oil to Phillips

PHILLIPS PETROLEUM COMPANY will explore for oil and gas over a near-million acre area of Alaska, the government announced recently.

Under the terms of a contract approved by Interior Secretary Douglas McKay, the company will drill at least 12 exploratory wells in the next ten years in the Katalla-Yakataga area. This region is on the Gulf of Alaska in the southern part of the territory.

This marks the first private oil and gas exploration in Alaska since the U. S. entered World War II, the Interior Department said. The Navy has done some exploration in the territory since then.

Phillips agreed to spend at least \$1,200,000 for exploration before June 30, 1956. After that it must spend at least 40 cents per acre per year for the land in the district. It will drill at least two wells before June 30, 1956. For the next two-year period, it must start drilling at least two more wells after that—from July 1, 1959, through June 30, 1963,

PUBLIC UTILITIES FORTNIGHTLY

it must drill at least two wells a year.

Interior said Alaskan governmental officials have supported the program as a means of providing more industry for

Alaska. The Phillips contract was worked out through negotiations with the Geological Survey and other agencies of the Interior Department.



CURRENT ELECTRIC UTILITY STATISTICS AND RATIOS

	Unit	Latest Month	Latest 12 Mos.	Per Cent Latest Month	Per Cent Increase Latest 12 Mos.
Operating Statistics (November)					
Output KWH—Total	Bill. KWH	33.7	395.6	5	8
Hydro-generated ..	"	6.5	—	D19	—
Steam-generated ..	"	27.2	—	12	—
Capacity	Mill. KW	80.9	—	8	8
Peak Load (October)	"	68.3	—	8	—
Fuel Use: Coal	Mill. Tons	9.9	—	—	—
Gas	Mill. MCF	69.9	—	32	—
Oil	Mill. Bbls.	7.7	—	30	—
Coal Stocks	Mill. Tons	41.8	—	6	—
Customers, Sales, Revenues, and Plant (November)					
KWH Sales—Residential	Bill. KWH	5.4	63	10	13
Commercial	"	4.0	48	6	9
Industrial	"	12.4	140	8	5
Total, Incl. Misc. ..	"	28.8	331	7	6
Customers—Residential	Mill.	31.0	—	4	4
Commercial	"	4.4	—	2	2
Industrial	"	.5	—	3	3
Total	"	38.2	—	3	3
Income Account—Summary (November)					
Revenues—Residential	Bill. \$	155	1,802	10	11
Commercial	"	110	1,306	6	8
Industrial	"	139	1,558	9	6
Total, Incl. Misc. Sales ..	"	444	5,131	8	8
Sales to Other Utilities ..	"	39	415	9	5
Misc. Income	"	18	222	29	9
Expenditures—Fuel	"	85	901	10	6
Labor	"	92	1,069	11	8
Misc. Expenses	"	70	840	4	4
Depreciation	"	43	502	7	7
Taxes	"	105	1,212	7	8
Interest	"	27	309	12	11
Amortization, etc. ..	"	—	11	D67	D49
Net Income	"	80	923	14	16
Pref. Div. (Est.) ..	"	11	126	11	8
Bal. for Common Stock (Est.)	"	69	797	17	19
Com. Div. (Est.) ..	"	49	567	10	8
Bal. to Sur. (Est.) ..	"	20	230	100	119
Electric Utility Plant (November) ..	"	22,496	—	10	—
Reserve for Depreciation and Amort.	"	4,559	—	8	—
Net Electric Utility Plant	"	17,937	—	11	—
Life Insurance Investments (January 1st-January 24th)					
Utility Bonds	"	—	42	—	7
Utility Stocks	"	—	8	—	76
Total	"	—	50	—	14
% of All Investments	"	—	5%	—	D21
FEB. 26, 1953	312				

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RECENT FINANCIAL DATA ON GAS COMPANY STOCKS

1951 Rev. (Mill.)		2/4/53 Price About	Divi- dend Rate	Approx. Yield	Share Earnings*			Price- Earn. Ratio	Div. Pay- out	
					Cur- rent Period	% In- crease	12 Mos. Ended			
Pipelines										
\$ 7	O	East Tennessee Nat. Gas . .	9	—	\$.40	—	Dec.	—	—	
30	S	Mississippi River Fuel . . .	39	\$2.20	5.7%	3.27	D1%	Sept.	11.9	67%
47	S	Southern Natural Gas . . .	32	1.40	4.4	2.35	5	Dec.	13.6	60
76	O	Tenn. Gas Trans.	26	1.40	5.4	1.79	37	Dec.	14.5	78
84	O	Texas East. Trans.	18	1.00	5.6	1.76	D2	Dec.	10.2	57
40	O	Texas Gas Trans.	17	1.00	5.9	1.19	D30	Sept.	14.3	84
39	O	Transcontinental Gas	23	1.40	6.1	1.32	15	Sept.	17.4	106
		Averages			5.6%				13.7	
Integrated Companies										
98	S	American Natural Gas . .	34	\$1.80	5.3%	\$2.16	D19%	Sept.	15.7	83%
188	S	Columbia Gas System . .	15	.90	6.0	.89	D26	Sept.	16.9	101
9	O	Commonwealth Gas	18	.25 #	1.4	.87	18	Dec.	—	29
8	A	Consol. Gas Util.	15	.75	5.0	1.42	D10	July	10.6	53
159	S	Consol. Nat. Gas	58	2.50	4.3	4.67	D6	Sept.	12.4	54
62	S	El Paso Nat. Gas	35	1.60	4.6	2.97	—	Oct.	11.8	54
27	S	Equitable Gas	24	1.30	5.4	1.82	NC	Oct.	13.2	71
13	O	Interstate Nat. Gas	43	2.50	5.8	3.27	1	Dec.	13.1	76
9	O	Kansas-Neb. Nat. Gas . .	24	1.25	5.2	2.11	36	Dec.	11.4	59
59	A	Lone Star Gas	29	1.40	4.8	1.50	D13	Sept.	19.3	93
17	S	Montana Dakota Utilities .	24	.90	3.8	.90	—	Sept.	—	100
11	O	Mountain Fuel Supply . .	20	.80	4.0	1.23	6	Sept.	16.3	65
42	A	National Fuel Gas	15	.80	5.3	1.28	6	Sept.	11.7	63
3	O	National Gas & Oil	8	.60	7.5	.72	NC	Sept.	11.1	83
40	S	Northern Nat. Gas	44	1.80	4.1	2.57	15	Sept.	17.1	70
25	A	Oklahoma Nat. Gas	41	2.00	4.9	3.36	21	Nov.	12.2	60
19	A	Pacific Pub. Serv.	17	1.00	5.9	1.47	D34	Dec.	11.6	68
52	S	Panhandle East. P. L. . . .	81	2.50 #	3.1	4.30	55	Sept.	18.8	58
8	O	Pennsylvania Gas	18	.80	4.4	1.81	20	Dec.	9.9	44
92	S	Peoples Gas Lt. & Coke . .	140	6.00	4.3	9.84	7	Sept.	14.2	62
17	O	Southern Union Gas	20	.80	4.0	1.06	D30	Dec.	18.9	76
3	O	Southwest Nat. Gas	8	.20	2.5	.62	51	June	—	32
126	S	United Gas Corp.	28	1.25	4.5	1.40	D8	Sept.	20.0	89
		Averages			4.6%				14.3	
Retail Distributors										
25	O	Atlanta Gas Light	22	\$1.20	5.5%	\$1.83	D2%	Sept.	12.0	66%
44	S	Brooklyn Union Gas	27	1.50	5.8	1.79	D14	Dec.	15.1	84
22	O	Central Electric & Gas . .	13 1/2	.80	5.9	1.03	14	Sept.	13.1	78
5	O	Hartford Gas	38	2.00	5.3	2.39	D11	Dec.	15.9	84
9	O	Houston Natural Gas	20	.80	4.0	1.32	D11	July	15.2	61
10	O	Indiana Gas & Water	26	1.40	5.4	1.78	D14	Dec.	14.6	79
5	A	Kings County Lighting . .	9	.60	6.7	.94	40	Sept.	9.6	64
29	S	Laclede Gas	10	.50	5.0	.91	D6	Nov.	11.0	55
19	O	Minneapolis Gas	22	1.15	5.2	1.27	4	Sept.	17.3	87
6	O	Mobile Gas Service	31	1.80	5.8	3.17	12	Sept.	9.8	57
5	O	New Haven Gas Light . . .	28	1.60	5.7	1.53	D20	Dec.	18.3	105
7 1/2	O	New Jersey Natural Gas	15	1.00 Est.	6.7	—	—	—	—	—
4	O	North Shore Gas	54	3.40	6.3	3.76	4	June	14.4	90
124	S	Pacific Lighting	57	3.00	5.3	4.97	48	Dec.	11.5	60
11	O	Portland Gas & Coke	20	.90	4.5	1.67	—	Dec.	12.0	54
7	A	Providence Gas	9	.32	3.6	.36	D37	Dec.	—	89
5	O	Seattle Gas	19	.80	4.2	1.24	D4	Sept.	15.3	65
5	O	South Jersey Gas	17	1.00	5.9	.99	13	Dec.	17.2	101
5	O	Springfield Gas Light . . .	32	1.80	5.6	1.63	—	Dec.	19.6	110
19	S	United Gas Improvement . .	36	1.72	4.8	2.19**	9	Dec.	16.4	79
27	S	Washington Gas Light . . .	31	1.80	5.8	2.33	6	Dec.	13.3	77
		Averages			5.1%				14.8	
Canadian										
14	S	International Utilities . . .	29	\$1.40	4.8%	\$1.88	18%	Sept.	15.4	74%

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RECENT FINANCIAL DATA ON TELEPHONE, TRANSIT, AND WATER COMPANIES

1951 Rev. (Mill.)			2/4/53 Price About	Divi- dend Rate	Approx. Yield	— Share Earnings* —			Price- Earn. Ratio	Div. Pay- out
						Cur- rent Period	% In- crease	12 Mos. Ended		
Communications Companies										
Bell System										
\$3,369	S	Am. Tel. & Tel. (Cons.)	160	\$9.00	5.6%	\$11.42**	D4%	Nov.	14.0	79%
28	O	Cinn. & Sub. Bell Tel. . .	75	4.50	6.0	4.56	D1	Dec.	16.4	99
106	A	Mountain States T. & T.	108	6.00	5.6	6.82	51	Dec.	15.8	88
203	A	New England Tel. & Tel.	115	8.00	7.0	6.96	D29	Sept.	16.5	115
478	S	Pacific Tel. & Tel.	119	7.00	5.9	8.24**	1	Nov.	14.4	85
62	O	So. New England Tel. . .	35	1.80	5.1	1.88	D11	Dec.	18.6	96
		Averages			5.9%				16.0	
Independents										
9	O	Central Telephone	13	\$.80	6.1%	\$1.35	24%	Sept.	9.6	59%
85	S	General Telephone	37	2.20	5.9	3.06	43	Nov.	12.1	72
3	O	Inter-Mountain Tel.	11	.80	7.3	.57	17	Dec.	—	140
298	S	International Tel. & Tel.	19	.80	4.2	2.60	16	Dec.	7.3	31
11	A	Peninsular Telephone..	44	2.40 #	5.5	3.50	D7	Sept.	12.6	71
13	O	Rochester Telephone ..	14	.80	5.7	1.45	2	June	9.7	55
2	O	Southeastern Tel.	12	.80	6.7	.91	65	Dec.	13.2	88
202	S	Western Union Tel. . .	41	3.00	7.3	†	—	—	†	—
		Averages			6.1%				10.8	
Transit Companies										
14	O	Cincinnati Transit	4	—	—	—	—	—	—	—
9	O	Dallas Ry. & Terminal	13½	\$1.40	10.4%	\$2.46	40%	Dec.	5.5	57%
227	S	Greyhound Corp.	13	1.00	7.7	1.26	6	Sept.	10.3	80
22	O	Los Angeles Transit ..	11	.63	5.7	.79	55	Dec.	13.9	80
31	S	National City Lines ...	15	1.00	6.7	1.91	—	Dec.	7.9	52
73	O	Philadelphia Trans. ...	5	—	—	Deficit	—	Sept.	—	—
26	O	St. Louis P. S. A	13	1.40	10.8	.35	D15	Dec.	—	286
4	O	Syracuse Transit	18	2.00	11.1	1.75	D40	Dec.	10.3	116
24	O	United Transit	3	—	—	.62	29	Oct.	—	—
		Averages			8.8%				8.3	
Water Companies										
Holding Companies										
26	S	American Water Works	11	\$.50	4.5%	\$.65	D28%	Sept.	16.9	77%
4	O	New York Water Serv.	46	.80	1.7	1.98	3	Sept.	23.2	40
Operating Companies										
3	O	Bridgeport Hydraulic .	30	\$1.60	5.3%	\$1.74	20%	Dec.	17.2	92%
8	O	Calif. Water Service ..	33	2.00	6.1	2.46	27	Dec.	13.4	81
2	O	Elizabethtown Water ..	101	5.00	5.0	5.74	D18	Dec.	17.6	87
6	S	Hackensack Water	35	1.70	4.9	2.56	D6	Dec.	13.7	66
3	O	Jamaica Water Supply .	32	1.80	5.6	3.01	35	Sept.	10.6	60
3	O	New Haven Water ...	54	3.00	5.6	2.91	D10	Dec.	18.6	103
1	O	Ohio Water Service ...	24	1.50	6.3	1.76	D9	Sept.	13.6	85
5	O	Phila. & Sub. Water ..	55	1.00	1.8	4.69	61	Dec.	11.7	21
1	O	Plainfield Union Water	56	3.00	5.4	4.09	D2	Dec.	13.7	73
2	O	San Jose Water	34	2.00	5.9	2.61	12	Nov.	13.0	77
6	O	Scranton-Springbrook .	16	.90	5.6	1.22	30	Sept.	13.1	74
3	O	Southern Calif. Water .	11	.65	5.9	.65	D32	Sept.	16.9	100
3	O	West Va. Water Service	36	1.20	3.3	1.28	D2	Sept.	—	94
		Averages			5.1%				14.4	

A—American Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. D—Decrease. *Earnings are calculated on present number of shares outstanding, except as otherwise indicated. **On average shares outstanding. #Includes stock dividend. NC—Not comparable. †Pro forma. ‡For the eleven months ended November 30, 1952, company reported deficit of \$0.92 per share. Preliminary estimates for December indicate earnings sufficient to produce net income for 1952 despite the large deficit caused by the telegraph strike earlier in the year.



What Others Think



New Administration Worries NRECA

UNCERTAINTY over the intentions of the new Republican administration in matters concerning public power and rural electrification set the tone of the National Rural Electric Co-operative Association convention, held in San Francisco, California, at the end of January. The association's executive manager, Clyde T. Ellis, denied that the election returns had in any way furnished a mandate for legislation that would permit purchase of government projects by private utilities or tampering with the rural electrification program and its loan funds, although some "would-be prophets" were predicting such congressional action.

According to Ellis, the chief danger to the rural electrification program is the nasty rumor being spread by some people that the program is just about completed. Although the 1952 annual report of the Rural Electrification Administration indicates that 88.1 per cent of the farms in the United States were receiving central station electric service on June 30, 1952, Ellis told the convention that "We must somehow overcome the propaganda that our program is nearly 90 per cent finished. We must keep before our system members, public officials, and the public in general that the farmers' electric systems are no more completed than are the commercial companies' systems completed."

Ellis predicted that proposed Federal projects in most cases would "continue to meet terrific organized opposition, representing special interests all the way from Wall Street to the Golden Gate. So also will our right and opportunity to generate our own power meet, perhaps, continuing opposition."

Ellis noted that in ten years the

number of NRECA member systems had increased from 500, representing 600,000 member families, to 900 member systems, representing some 3,000,000 families. The systems include co-operatives, public utility districts, and public power districts. He declared:

But on one score, we have not been too successful. We have not been able to offset the tide of propaganda running against us in the newspapers, magazines, radio and television programs, and in many civic, commercial, and industrial organizations.

We have not been able to do much about the power company court cases that have struck us hard, particularly on our right to generate and integrate—cases now proceeding toward final decision, involving all our program indirectly but involving directly our program in Missouri, Arkansas, and Kentucky. Another case, involving our right to purchase Federal power, has been filed against us recently in South Carolina and an injunction granted against construction proceeding on the necessary line.

THE lobbying activities and publicity campaigns of privately owned public utilities, a continual sore point with NRECA, came in for the usual severe criticism. Democratic Congresswoman Gracie Pfof of Idaho, in an eloquent plea for Hell's Canyon dam, charged that 150 power companies had paid \$50,000 for an ad attacking the proposed dam, "part of an advertising campaign that costs well over a million dollars a year and has been going on for ten years or more. You pay for it in your power bills," she declared, "you pay the cost of pouring false propaganda into your own

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minds." Mrs. Pfost pointed to her election in November, in the face of a Republican landslide, as proof that "the people want Hell's Canyon dam."

IRRITATION with efforts of private power companies to make known their views on Federal proposals found official expression in the shape of a resolution calling for a congressional investigation of "multimillion-dollar" lobbying against rural electric co-operatives and public power developments by private power companies. It declared that the private power industry has recently "manifested the same arrogant disregard for the public interest that it showed in the 1920's." The industry was accused, furthermore, of "obstructive court action" against co-ops and "attacking the very processes of democratic government and the government itself." A companion resolution asked Congress to reject "a barehanded raid on the commonwealth" threatened by "certain vested interests." Among the objectives of such a raid, the resolution said, was a turnover of the national forests for private exploitation; sale of TVA, the Bonneville Power Administration, and other Federal projects to private corporations; and the abolition of such government lending agencies as the Rural Electrification Administration.

Other resolutions called for further public power development in all sections of the country, construction of public transmission lines to carry the resulting power to public users, and adequate loan funds to carry on expansion of electric co-ops' power and telephone systems.

REA Administrator Wickard reported that the REA as of January 1, 1953, had loaned \$2,669,000,000 for the furtherance of the rural electrification program, and that the demand for loan funds was running considerably ahead of estimated requirements, which had been about the same as the \$165,000,000 loaned during the fiscal year ended last June 30th. "Before we make plans for a loan program in excess of \$165,000,000 for the current fiscal year," he said,

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"we believe it proper that we discuss such plans with the leaders of the appropriations committees in Congress."

Wickard declared that for 1952 the average wholesale power cost of REA borrowers was 8 mills per kilowatt hour, which he termed the lowest in REA history. The average retail rate paid by REA consumers, 3.1 cents per kilowatt hour compared with 3.7 cents five years ago, likewise was the lowest in history, he added. "In my opinion," Wickard said, "the greatest factor in keeping down the wholesale power costs to REA borrowers all over the nation has been the authority of REA to make loans for generation and transmission facilities." He predicted a continuation of efforts to limit REA's loan authority in this field.

Bonneville Power Administrator Paul J. Raver laid down a four-point program of responsibility that he said both public and private power agencies must follow to survive. The gist of his program was that all utilities must serve "all who come," and that customers must be served with adequate facilities, reasonable rates, and without discrimination. Raver proposed in December that the Bonneville Regional Advisory Council study the feasibility of the Federal government's getting out of the power business in favor of an interstate agency of some sort. Since that time, he has been the subject of some controversy among public power supporters. His speech to the NRECA was not delivered personally, and received a mixed reaction.

THE strident tone of some of the resolutions passed by the convention suggested an uneasiness over the recent reorganization of the Department of Agriculture by the new Secretary Ezra T. Benson. The reorganization involved, among other things, the appointment of Romeo E. Short as assistant to the Secretary in charge of three credit agencies, including REA. Short, as a former vice president of the American Farm Bureau Federation, has been openly critical of REA "super co-op" policy. Whitney Gilliland, also named an assistant to

WHAT OTHERS THINK

Benson, described his job as "politics in reverse"—generally interpreted to mean keeping the work of the Agriculture Department as clear as possible from politics, including organized pressure groups.

It was the first time in many years that an NRECA convention opened without a message of greeting from the

President of the United States, a development that created some disappointment. Secretary Benson sent a brief telegram expressing regret over his inability to attend the 4-day convention, but sending "every possible good wish for your future contribution to the welfare of the farmers."

Public Safety Rôle of Utilities Commended

THE rôle of electric utilities in the field of public safety was given recognition recently in a "Salute to Electric Utilities," released by Edmond C. Powers, director of public information of the National Street and Traffic Lighting Bureau of New York and Cleveland, Ohio.

"In ever-increasing numbers and with steadily growing intensity, electric utilities are surveying their communities' street lighting and, working closely with government, are ridding our streets of dangerous, inadequate, and obsolete lighting and replacing it with the amount of illumination needed for safe visibility as determined by long years of study by illuminating engineers and research and development engineers of the lighting equipment industry," the release declared.

The widespread benefits of this public service attitude of the electric utilities include the saving of life and prevention of injury and property damage from reduction in night traffic accidents. Pointing to the reports from communities where street-lighting improvement has reduced fatal traffic accidents 50 to 80 per cent, the following statistics were pre-

sented: Cleveland, Ohio, fatal night accidents before lighting 59, after 42; Detroit, Michigan, 9 before, none after; Grand Rapids, Michigan, 14 before, 3 after; Hayward, California, 6 before, none after; Hartford, Connecticut, 11 before, 4 after; Houston, Texas, 5 before, 1 after; Los Angeles, California, 11 before, none after; Seattle, Washington, 2 before, none after.

THE number of lives reported saved in only these ten instances—ninety-two—represents a fatal traffic accident reduction of 64 per cent, it was noted. Applied to the nation's 1951 night accident death toll of 20,700, this indicates a possible saving of more than 13,000 lives. A reduction of 50 per cent would mean a saving of 10,000 lives annually.

In addition to curbing night traffic accidents, modern street lighting is credited with providing the community's greatest safeguard against street criminals. Reports from police officials from widely scattered parts of the country show a reduction of more than 50 per cent in purse snatchings, street assaults, car thefts, holdups, and vandalism following the modernization of lighting.

Notes on Recent Publications

THE UTILITY EXECUTIVE: HIS JOB AND HIS TRAINING. The first specific study to be made of the utility executive is described in this report of Columbia University's First Utility Management Workshop, obtainable from the university's department of industrial engineering. Professor Robert T. Livingston, workshop director, explained that the contents of the report were written by

the participating utility executives themselves, in consultation with outstanding specialists on management and executive training, and with the help of data and other material supplied by the Columbia University research team.

The Utility Executive includes summaries of formal talks by faculty members and such outside specialists as James Carpenter,

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vice president, Long Island Lighting Company; John E. Conley, McCormick & Company; E. S. Evans, Edison Electric Institute; Dr. John Foley, Psychological Corporation; Earl C. Planty, Johnson & Johnson; Fred R. Rauch, vice president, Cincinnati Gas & Electric Company; and Dr. Erwin Schell, Massachusetts Institute of Technology.

Featured are the conclusions and evaluations of the utility executives, reached after pooling their actual experience and after reviewing reports and studies on utility management and executive development which ranged from the earliest "decide, order, and drive" practices to the latest group dynamics theories. The volume is divided into two main sections. The first, "A New Look at the Executive," is a functional analysis of the job of a utility executive, dealing with planning, decision making, public relations, human relations, supervision, and control. The second, "Executive Training Programs," deals with three general types of training: on-the-job training, group training, and individual development.

The publication indicates that the workshop members developed a new approach to the real job of an executive, described as a way of getting things done with the least expenditure of time, money, and effort. This is said to be a problem of creating an atmosphere in which subordinates, equals, and superiors will release their creative energies in the pursuit of a mutual goal. The vast literature on executive training was reviewed at the workshop, and the published report summarizes the ideas and methods selected for their specific value to the utility industry.

The Utility Executive contains 66 digests, outlines, and summaries of papers prepared by the workshop members or presented in plenary sessions. It includes 7 photographs of the sessions and 15 reproductions of display charts used in the workshop. A chart designed by the workshop members is included, which rates each training method according to its value in developing the various executive qualities assumed to be desirable in the industry. For further information, address Professor David B. Hertz, Columbia University, Department of Industrial Engineering, New York 27, New York.

STATICALLY INDETERMINATE STRUCTURES. The author of this new addition to the engineering series, published by The Ronald Press Company, is Professor Paul Andersen of the University of Minnesota. Professor Andersen has gained wide recognition for his contributions to the field of structural engineering. In contrast to most volumes on statically indeterminate structures which are confined to the theorems of analysis, Professor Andersen's new book directly associates structural analysis with structural design. Instead of considering hypothetical

rigid frames, the book analyzes a variety of actual structures. It treats three-dimensional frames and shows how to design them—a phase of structural design which has largely been neglected.

Because of the realistic approach in emphasizing actual problems faced by the designing engineer, this book should prove of great practical value to the practicing engineer, as well as the student. *Statically Indeterminate Structures.* By Paul Andersen. The Ronald Press Company, 15 East 26th street, New York 10, New York. Price, \$7.50; 318 pages. 1953.

METADYNE STATICS. An original study of the steady state characteristics of a significant new group of machines—Joseph M. Pestarini's *Metadyne Statics*—contains an authoritative explanation of this latest milestone in electrical development. The first man to classify and define this important electrical drive and control device, Dr. Pestarini deals with the theory, design, and application of metadynes. He begins with the general rules as they apply to all metadynes, and analyzes their common characteristics. The particular types of metadynes are then covered, with detailed expositions accorded to generator and motor metadynes, transformers, the hyperstatic metadynes, pliodynes, and other individual types.

A lecturer at the Massachusetts Institute of Technology and Columbia University, Dr. Pestarini has provided the impetus for the establishment of metadyne plants in several countries. He has seen his subject advance beyond the theory stage, with its applications expanding into such fields as radio electronics, railway engineering, textile technology, power and stool, and chemical engineering. *Metadyne Statics.* By Joseph M. Pestarini. John Wiley & Sons, Inc. 440 Fourth avenue, New York 16, New York, and The Technology Press of Massachusetts Institute of Technology. Price, \$9; 415 pages. 1952.

A PUBLIC RELATIONS PROGRAM FOR THE GAS INDUSTRY. Adoption of an integrated national and grass-roots public relations program by the nation's gas utilities and pipeline companies is recommended by the American Gas Association in this special printed report which has been mailed to all member companies of the AGA. The need for such a program is considered urgent because of the phenomenal expansion of the gas industry in recent years which is believed to have outstripped the public understanding of the industry and its problems. The report suggests a program whereby gas industry employees, the public, governmental agencies, and leading opinion-forming groups may be more fully informed on the present stature, problems, and significance of the gas industry.

The March of Events



In General

Bill Proposes Fallbrook Dam Plan

THE drive to settle the dispute between the Navy and Fallbrook area residents over division of Santa Margarita river water broadened recently when the two California Senators introduced a bill authorizing construction of a dam financed jointly by the Federal government and local landowners to impose floodwaters on the southland stream.

Senators Knowland and Kuchel (Republican) submitted a measure almost identical with the proposal advanced

earlier in the House by Representatives Utt (Republican) and Engle (Democrat) designed to end the controversy which led to the Justice Department's suit against thousands of small farmers in the Fallbrook area.

The Knowland-Kuchel bill differs from the Utt-Engle legislation in one important respect. The Senators decided not to propose a requirement that Federal officials in pressing water claims growing out of Federal property holdings must conform with state laws. This feature of the measure pending in the House was omitted from the Senate proposal for reasons of legislative strategy.

Arkansas

House Refuses to Amend Utility Statute

THE traditional sanctity of Arkansas' 1935 public utilities statute was preserved again in the state house of representatives early this month. By a 34-43 vote, the lower chamber refused to amend the law to prohibit telephone companies with more than five exchanges from inaugurating rate increases by posting a bond with the state public service commission.

The only speech made on the issue was a brief one by the author of the bill (HB

104), Representative Dan White of Sebastian county, who is reported to have a running feud on with Southwestern Bell Telephone Company over its rate policies and operational procedures.

White said the big telephone companies would continue to invoke the rates-under-bond clause every time they wanted to increase rates and without regard for the telephone patrons' ability to pay. The last two rate increases obtained by Bell have been under this clause, which permits inauguration of the increases while the commission is studying the need of rate increases.

Georgia

House Passes Commission Bill

IN the face of stubborn opposition from some members the state house of

representatives recently voted \$5,000 annual pensions for retiring members of the state public service commission and a

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\$3,600 annual expense allowance each for active public service commissioners. The pension bill was nudged through the house by a vote of 111 to 23 (103 ayes were needed to secure its passage). The expense account raise passed by a vote of 113 to 63.

Representative McWhorter of DeKalb county, although fighting the pensions as "rocking chair money," said he favored a pay raise since public service commissioners did not get one several years ago

when other state officials received increases. He voted for the \$3,600 expense account.

Sales Tax Bill Defeated

A BILL that would have exempted natural gas and other heating fuels that go into the manufacture of finished products from the state sales tax was defeated recently by the state house of representatives.

Illinois

New State Agency Proposed

THREE bills proposing the creation of a new Illinois state agency empowered and equipped to resist petitions of public utilities for rate increases were introduced in the state legislature this month by Senator Marshall Korshak, Chicago Democrat, and others.

Korshak contended that telephone, gas, and water companies seeking to increase rates have met in the past with

"inadequate opposition on behalf of the public interest." He said the proposed new agency would "represent the public interest vigorously" where study showed opposition was warranted, but would not act merely in an "obstructionist rôle."

The proposed new "public utilities agency" would be created as an adjunct of the state commerce commission. Its staff, headed by a director, would be appointed by the governor. It would be given an appropriation of \$50,000.

Minnesota

Contract Averts Strike

THE union contract that averted a streetcar strike early this month will add substantially to increased operating costs of Twin City Rapid Transit Company, Fred A. Ossanna, company president, said recently.

He first estimated operating expense would be increased by a million dollars this year and by more than a million in 1954, under terms of the 2-year contract with the union. That included the wage increase, liberalized pension provisions,

and "fringe" benefits for some 2,000 workers.

When the union protested the million-dollar figure had to be predicated on the theory all eligible pensioners would retire ahead of schedule, as permitted by the new contract, Ossanna revised the increased cost estimate to an additional \$600,000 in wages the first year, \$165,000 in added pension costs, and other expenses. That raised the question whether TCRT would ask for a new increase in fares to cover the added expense.

Missouri

Co-operative Has No Right to Condemn

A SPECIAL judge in the Clay County Circuit Court ruled recently that

the Northwest Power Co-operative, which is constructing a \$10,000,000 power plant at Missouri City, does not have the right to condemn property.

The ruling was made in sustaining a

THE MARCH OF EVENTS

motion to dismiss a condemnation suit brought by the co-operative to acquire land for a transmission line tower. The motion was made by the defendants.

L. Madison Bywaters, a Liberty lawyer, was a special judge appointed by attorneys for both parties after Judge James S. Rooney disqualified himself.

The effect of the ruling is to challenge the constitutionality of a section of the Missouri Rural Electric Co-operative Act, regarding condemnation powers. Attorney for the co-op said the case would be appealed to the state supreme court. Lawyer representing defendants argued that the co-op does not serve the general public and therefore has no power to condemn property.

The Missouri Constitution provides

that private land cannot be condemned except for public use. The power co-operative statute permits the sale of power only to members of the co-operative and others not to exceed 10 per cent of the number of members.

Eight power co-operatives in northwest Missouri are members of the NW co-operative. The NW plant would produce and transmit power to the eight power co-operatives which would then sell to members.

The power plant is being financed by an REA loan. The project is expected to be completed in July. It will consist of two 20,000-kilowatt generators and would supply power to about 35,000 rural customers in northwest Missouri and in Iowa.

New Hampshire

Existing Rates to Remain

EXISTING electric rates are to remain in force and be made permanent, the state public utilities commission ruled recently in a split decision. The majority of the three-man board said that it had corrected the errors of its order of last June granting the Public Service Company of New Hampshire an increase in permanent rates of \$1,344,742 a year and found that the Manchester firm was still entitled to exactly the same amount.

The error in the May order had been detected by the state supreme court. Last month the high court returned the case to the commission with instructions to make corrections.

In a sharply worded dissenting opinion, Commissioner Edward R. Thornton took issue with the findings of Commission Chairman Harold K. Davison and Commissioner Edgar H. Hunter.

If the state supreme court's instructions are followed, Commissioner Thornton said, there should be a reduction in rates of \$191,146.

"Any departure in original cost theory of rate base figuring," Commissioner Thornton declared, "is a backward step in regulation," and the effect on utility rates in general "can well be drastic."

President Avery R. Schiller of the Public Service Company said the "majority of the commission" has been "realistic" in making rates which recognize the "impact of inflation" on the company's earnings. He said the commission did this by recognizing the "attrition factor."

Referring to Commissioner Thornton's dissenting opinion, Schiller said that had these views been "permitted to prevail, the company would have failed by a larger margin to earn the intended rate of return."

Pennsylvania

Utility Strike Law Called Illegal

ATTORNEY GENERAL Robert E. Woodside, Jr., said recently that a 1947

law prohibiting strikes of public utility employees may be unconstitutional. Therefore, he added, any attempt to make the state law apply to workers for

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transit companies likely would be futile.

Mr. Woodside said that a decision of the United States Supreme Court early in 1951 voided a similar act passed by the Wisconsin legislature. The high court ruled that the Wisconsin law, which was patterned after the one in Pennsylvania, encroached on Federal legislation—especially the national emergency strike clause of the Taft-Hartley Act.

Representative William A. Bolton, Glenside Republican, late last month introduced a bill to extend the law to transit firms. He acted after a strike crippled the Philadelphia Transportation lines.

To date no issue has arisen to require a test of the constitutionality of the Pennsylvania law. Woodside said he would issue no official opinion unless a case arises to test the 1947 law.

Texas

Controversial Natural Gas Tax Upheld

THE validity of Texas' tax on natural gas gathering was upheld on February 4th by the Austin Court of Civil Appeals. Its decision reversed District Judge Roberts' judgment in Austin that the levy violates the Federal Constitution because it applies to interstate pipelines. The tax also applies on gas used inside Texas.

An appeal to the state supreme court and then to the U. S. Supreme Court appeared certain.

More than \$11,000,000 paid under protest is tied up in the state treasury, and 111 suits for refund have been filed. Test cases tried by the courts include Panhandle Eastern Pipe Line Company, Michigan Wisconsin Pipe Line Company, and Amarillo Oil Company.

Utility Commission Proposed

A THREE-MEMBER, elected public utility commission recently was proposed in the state legislature. Representative Robert Patten of Jasper introduced the bill to give the new agency statewide regulatory and rate-making powers over electric, telephone, and natural gas utilities.

The proposed commission's expenses would be paid by the companies and prorated on annual business.

Representative Patten said cities now regulate utilities piecemeal, without any uniformity of charges. The state railroad commission serves as arbiter in rate disputes between natural gas companies and cities.

The cities would retain franchise and taxing privileges over the utilities, Representative Patten explained.

Washington

Five PUD's Ruled Out in Suit

A SUPERIOR court judge recently granted a motion to drop five public utility districts from a legal action brought to block the proposed \$94,000,000 sale of Puget Sound Power & Light Company properties to the PUD's. This leaves only the Kitsap Public Utility District as defendant. A hearing was scheduled for February 20th.

Judge Agnew of Seattle, sitting on the Kitsap Superior Court bench, granted the motion of Jefferson, Chelan, Skagit,

Thurston, and Snohomish districts to quash the action naming them defendants.

Advocates of public power also received a serious setback early this month when a special committee of stockholders of Puget Sound Power & Light favored a merger with the Washington Water Power Company. The companies are leading producers of electricity in the Pacific Northwest.

Washington Water Power has made two separate offers for Puget Sound. The most recent was intended to overcome an objection to the original proposal.



Progress of Regulation

Rate Base Must Be Present Value Determined after Consideration Of Reproduction Cost

THE Illinois Supreme Court reversed a commission decision in 92 PUR NS 164, denying Illinois Bell Telephone Company a rate increase of approximately \$23,000,000. The court remanded the case to the commission with a direction that specific findings be made as to reproduction cost.

At the outset two procedural questions were disposed of by the court. The first was whether the superior court of Cook county, to whom the city of Chicago had appealed from the commission order, or the circuit court of Kane county, to which the company had appealed from the same order, had jurisdiction. The court ruled that since the city was not adversely affected by the commission decision, the city's appeal was ineffective and did not deprive the Kane county court of jurisdiction to pass on the appeal of the company, which clearly was adversely affected.

The second procedural question was raised by the city's contention that the commission should have canceled the schedules filed by the company for the reason that less than two years had elapsed since the last rate order. The wording of the statute relied on follows:

Only one rehearing shall be granted by the commission; but this shall not be construed to prevent any party from filing a petition setting up a new and different state of facts after two years, and invoking the action of the commission thereon.

The court noted that this question has been raised many times before the commission and in the trial courts but "has not heretofore been directly raised and squarely passed on by this court."

The court pointed out that over the years the commission has consistently overruled objections to its jurisdiction based on this statute. Surely, the court said, if the legislature had intended the sentence to act as a limitation on the administrative body created by it and found that it was being ignored, the act would have been amended so as to clarify its meaning. In ruling that the provision does not place a 2-year limitation on the commission's acting on utility rates, the court ruled that the construction contended for by the city was in conflict with the primary purpose of the act to set up machinery for continuous regulation as changes in conditions warrant.

The commission's ruling that present rates were affording the company a reasonable return and that the company failed to maintain its burden of showing that the proposed increases were reasonable was challenged by the company in a statement in which the issues on which the appeal was predicated were set forth as follows:

(1) Whether the commission may fix utility rates without giving effective consideration to current economic conditions, particularly the current earnings of other enterprises and present price levels, (2) whether the commission's mechanical "interest plus

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dividends" formula is a reasonable and lawful basis of rate regulation.

The company made a serious effort to compare the earnings, capital structure, dividends, rates of return, investment, and debt ratios of various large industrial corporations with the company's own financial condition over a period of years. The court took notice of the fact that there is a difference in industrial and utility investments because of the varying degrees of risk. A utility investor cannot expect either high or speculative dividends but only a fair and reasonable profit. The court summarized the commission's rate-making function in these words:

In the final analysis, the rates fixed by it (in fixing prices as low as possible for the general public purchasing the services) should be sufficient to provide for operating expenses, depreciation, reserves that are necessary in good business judgment and operations, and a reasonable return to the investor on the basis of the fair value of the utility property.

The commission urged the court to depart from previous rulings in utility rate cases based on the United States Supreme Court decision in the *Hope Natural Gas Case* (1944) 320 US 591, 51 PUR NS 193. That case, the court said, dealt with a wasting asset (natural gas) and is not applicable to the present proceeding.

The court rejected the commission's position that it should be permitted to use only the value of the investment without regard to the present value of property dedicated to public service as a basis for rates, and the further claim that one of

the important factors in fixing a rate base is the rate of return, with the following comment:

This statement at first blush has a deceptive quality of truth. Its best criticism is that it creates an inextricable circle, providing no beginning nor any basis for fixing a rate of return other than the nebulous formula "that when all things are considered the rate should be just and reasonable and provide a reasonable return on the investment." A further criticism would be that the adoption of such a rule would inevitably lead to the sin of overinvested capital, or to a situation susceptible to "watered stock."

The court traced the development of the "present fair value" basis for rate making in Illinois. Neither reproduction cost nor original cost is the sole basis for rate making. The court indicated that it would "consider any value a fair value which fair and reasonable men would say ought to be attached to the property under the circumstances of the particular case."

While the percentage return of 5.2 per cent found by the commission was not considered unreasonably low, the court commented that a utility ordinarily is entitled to a rate of return not less than the legal rate of interest.

The failure of the commission to make a determination of the reproduction cost of the company's property was adjudged a serious error "because a fair present value of a public utility cannot be determined without full and proper consideration being given to the cost to reproduce it new." *Illinois Bell Teleph. Co. v. Illinois Commerce Commission*, Docket Nos. 32519, 32548, January 22, 1953.



Debentures Issued to Finance Electric Construction Program

AN electric company was authorized by the Connecticut commission to issue \$15,000,000 aggregate principal amount of debentures to finance a construction program. The growth of the company's load and the gradually de-

creasing reserve capability indicated that the company should engage in sizable construction activities in order to accommodate the loads which it could reasonably anticipate in the very near future.

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This included expenditures for transmission and subtransmission facilities, substation and substation improvements, other distribution facilities, additions and improvements to its stations, transportation equipment, ordinary line extensions, transformers, meters, and other miscellaneous expenditures. The expenditures were deemed necessary in the public interest to enable the company to provide adequate service.

When questioned on the advisability of financing only \$15,000,000 at this time, the chairman of the company's board of directors testified that because the estimate of cash available was only approximate and uncertain, and many of the contract commitments had escalator clauses, there was considerable doubt in the minds of the management as to the exact amount of additional funds required. Furthermore, the marketing by the company of debt securities in a larger sum would bring the company's debt ratio over 50 per cent and would probably result in a loss by the company of its triple A rating, according to expert advice. As a consequence of losing this

rating, the cost of money to the company would probably be adversely affected.

After issuance of the debentures, the company's capitalization would consist of 48 per cent long-term debt, 12 per cent preferred stock, and 40 per cent common stock and surplus. The funds would be used to repay current liabilities in the form of notes payable incurred for construction purposes already carried out as part of the program, and the balance would be used to finance the construction program directly.

The debentures were being offered for private sale to institutions for investment at 101.72 per cent, plus accrued interest, yielding 3.15 per cent to the buyer and costing approximately 3.18 per cent to the company at a net cost basis. The total expenses, including Federal revenue stamps, trustee's fee, and legal fees, compared favorably with similar issues by Connecticut utilities. The commission held that the expenses incurred and the cost to the company of the proposed issue were within reasonable limits. *Re Hartford Electric Light Co. Docket No. 8746, December 12, 1952.*



Separation Procedures Approved

THE Montana commission approved a telephone company's application for a rate increase which would afford it a return of 5 per cent on net book investment. The company, upon making the new rates effective, would be able to furnish adequate service and maintain a financial condition which would attract capital for expansion.

Separations procedures in which the direct cost for intrastate service was used wherever possible, with other costs being allocated on a unit-of-service basis, were considered proper. *Re General Teleph. Co. of the Northwest (formerly Interstate Teleph. Co.) Docket No. 4046, Order No. 2364, December 29, 1952.*



"Key Man" Insurance Premiums Not Proper Operating Expenses

A TELEPHONE company's application for approval of a new schedule of rates for local exchange service was approved, with some modification, by the Alabama commission. The rates proposed by the company would have afforded it a return of 7.17 per cent on net investment. The commission did not

allow these rates to become effective because they would produce annual revenues in excess of the company's reasonable requirements.

Charges to the company's operating expense account for premiums paid for a life insurance policy on one of its employees, in which the company was

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named as beneficiary (often called key man insurance), were disallowed.

Adjustments in telephone operators' salaries to bring them to a level comparable with that of local wage rates were considered proper "to attract and retain the quality of operating personnel required to render efficient service."

A request that the company's present practice of rendering monthly bills in advance for all local service be made uniform was approved, notwithstanding the fact that the change entailed the company's forfeiting one month's billing in one of its exchanges. *Re Peoples Teleph. Co. Docket 13251, November 26, 1952.*



Improper Cost Allocation in Railroad Discontinuance Proceeding

AUTHORITY to discontinue certain railway passenger trains was denied by the Tennessee commission. Not only was it admitted that public convenience and necessity required continued operation of these trains, said the commission, but the railroad failed to satisfy the statute requiring the commission to grant such authority if direct operating costs of such trains exceeded aggregate gross revenues by more than 30 per cent in a 12-month period.

The railroad's error, it was pointed out, was in the determination of what constituted a direct cost assignable to the trains in question. Engine house expenses were held not to be such direct costs, even though some personnel might be discontinued and insurance and maintenance of the building might be less, be-

cause the structure is needed in railroad operations and will continue to stand and be used regardless of whether the trains are continued or discontinued. Under the same theory, the cost of maintaining ways and structures was disallowed. Freight sheds, buildings, etc., which are useful in the operation of the railroad are merely incidental in regard to trip operations of trains over a given period.

Further, it was said, direct costs do not include taxes, depreciation, administrative expenses, or compensation of supervisory employees and other personnel whose services are necessary to railroad operation but which are merely incidental to the completion of any trip made by a particular train. *Re Louisville & Nashville R. Co. Docket No. R-3308, December 9, 1952.*



Accounting Procedures Prescribed for Short-term Amortization of Defense Facilities

A POWER company's request for instructions with respect to accounting for facilities for which emergency certificates had been obtained permitting a short-term write-off was given careful consideration by the Georgia commission.

The company set forth in some detail its views on the effect of a 60-month amortization on its depreciation and tax accounts. It said:

... the effect of electing to take deductions for income tax purposes under the certificates of amortization is to anticipate in the amortization period the allowable deductions for depreciation expense which would

normally be allowable over the useful life of the property remaining after the amortization period, and that if the tax rate remains constant, the aggregate income tax payments over the entire period will be the same whether the deduction is taken in sixty months or is spread over the life of the property.

The advantage afforded by the short-term write-off is that cost-free capital funds are provided during the period of tax deferral for the financing of property additions. The difficulty which might result from the amortization was described as a distortion of income which would create an inequity both as to customers

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and investors by pre-empting for current operations credits which properly apply over the entire lives of the facilities.

Four methods of accounting for the short-term amortization were considered. Under one method the actual taxes paid during the year would be charged to expenses with no change in depreciation expense. While this method makes for an accurate reporting of the company's operation for a specific period, it is only of value if the perspective is limited to the single year being considered. The commission summarized its objections to this method in this statement:

The method seems to assume that the amortization provision for income tax purposes represents a tax saving, while in reality it is a tax deferment, because higher taxes will be payable than otherwise would be after the amortization period has ended. The later higher taxes result from the lesser depreciation expense deduction for tax purposes after the facilities are amortized. The application of this method records higher earnings in the 5-year amortization period and lower earnings thereafter. If no rate revision is made the tax deferment could be paid out in dividends to stockholders, certainly an undesirable result. If rates for service are adjusted to reflect the tax deferment, the result is lower rates for five years, and then higher rates than otherwise for service thereafter, everything else being equal. With no change in cost of service (including the return component) there seems to be no good argument to reduce rates at present at the expense of future ratepayers. The inevitable results would be higher rates in the future, resulting from the benefits given today and the creation of a higher cost of operation in the future. It appears that cost of operation should not be so altered, particularly when it adds future costs to currently increasing costs.

The second method accounts for depreciation expense at the amount resulting from the accelerated amortization.

This would be proper if the facilities' useful life coincided with the amortization period. However, since none of the facilities have such a limited life, this method would increase operating revenue deductions in the first five years by the amount that the increase in depreciation expense exceeded the amount of the tax deferment. After the amortization period, the operating revenue deductions would be reduced. This method, the commission said, would have the reverse effect of the first method. Earnings would be lower for the first five years and higher thereafter. If company rates followed this result, present rates would be high, later rates lower. If rates were not altered, there might be serious difficulty in raising required capital during the period of inadequate earnings.

The third method would increase depreciation expense during the amortization period in an amount equal to the tax deferment and later decrease this expense in the amount of later increased income taxes. While this method would eliminate the objections of the first two methods and have the added appeal that the deferred taxes would be in the depreciation reserve and, therefore, deductible from the rate base, the commission ruled that it appeared to mix two accounting items where only one was involved. In addition to this objection, the commission ruled that since the amortization authorized by the Internal Revenue Code did not result in any actual acceleration in the depreciation of the facilities, there was no justification for altering normal depreciation charges.

THE fourth method considered was that suggested by the company. It contemplates "normal depreciation expense on defense facilities, a charge to provision for deferred income taxes" and a credit to "reserve for deferred income taxes" during the amortization period, and a charge to that reserve and a credit to "current income taxes deferred in prior years" after that period has elapsed." This eliminates any distortion of earnings by crediting to the income statement

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in later years the dollar amounts charged during the initial period. The commission approved this method.

The commission also disposed of the suggestion that deferred taxes be carried in a restricted earned surplus account rather than in the reserve for deferred income taxes. This would be proper for unregulated industry but not for a utility. The increased capitalization of the company during the period of accounting for the deferred taxes might be viewed by stockholders, and claimed by the company, as capital on which a return should be earned. Since the deferred taxes would provide funds at no cost, they should not be included in the company's capitalization.

The commission also indicated what disposition would be made of the deferred taxes in rate proceedings. Since the amounts in the deferred tax account are supplied at no interest or dividend

cost, no return on them should be allowed. On an invested capital rate base the deferred tax account will be excluded, while on a plant and equipment rate base the item will be deducted (similar to the treatment of depreciation reserve) if the funds so provided are invested in plant and equipment, materials and supplies, or working capital.

As a safeguard, the commission, in conclusion, prescribed these two conditions on the short-term amortization:

One is that the full amount of credits to the reserve for deferred income taxes should be credited back to income after the amortization period. The other condition is that the accounting for the deferred taxes should not be spread over an unusually long period of time. (A limit of thirty years was approved.)

Re Georgia Power Co. File No. 19314, Docket No. 467-U, December 23, 1952.



Substitution of Straight Cash Transit Fare for Tokens

AUTHORITY to substitute a straight 10-cent cash transit fare for a 3-token-for-25-cent or 10-cent cash fare was granted by the Connecticut commission. The company's major source of revenue came from industrial rush-hour service and 75 per cent of the patrons used the token system.

After commenting on the continual decline in revenues and the gradual increase in operating expenses in the motorbus industry generally, the commission said that the general public does not accept rate increases as the most welcome of solutions and that it is with ex-

treme reluctance that the commission has accepted such a course to permit operators to continue to serve the transportation needs of the general public.

The commission refused, however, to authorize increased school fares. Such riders do not have the alternatives in modes of travel available to adult passengers; their transportation needs are relatively constant and static; and if an increase were granted, the company's revenue increase would be relatively small. *Re Nyquist (East Street Bus Line) Docket No. 8739, January 5, 1953.*



Incorporation under General Business Act Renders Mutual Company Subject to Commission's Jurisdiction

THE Missouri commission, in authorizing a company purporting to be a co-operative association to acquire existing telephone facilities, held that the association was a "telephone corporation" furnishing service "for hire" and as such subject to its jurisdiction. None of the

existing system was new. Much equipment was old and there were many complaints as to poor service. The manager of the selling corporation was advancing in years and found the work and responsibility of operation a burden. The sale was considered to be in the best interests

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of present subscribers and of potential subscribers in the area which the buyer sought authority to serve.

The buyer was organized under the General and Business Corporation Act of Missouri. It purported to be a co-operative. Its articles, as amended, did not provide for any dividend payments to stockholders. Receipts in excess of operating costs were to be set up as capital credits to the account of its members. The new company would continue to serve present subscribers without requiring them to purchase stock. However, all other subscribers would be required to become members by the purchase of one

share of common stock. The buyer stood ready to offer service generally to anyone in the area requesting it.

After considering the co-operative features of the buyer company, the commission concluded that its services were "for hire," whether or not it expected to make a profit. It said that even though dividends are never paid, when the company's indebtedness is discharged the stockholders will own the plant and will thereby achieve a profit. It considered it significant that the company was organized under the General and Business Corporation Act. *Re Steelville Teleph. Co. Case No. 12,408, December 10, 1952.*



Transit Contract with Municipality Not Effective

THE Indiana commission dismissed both a petition by a transit company for investigation and determination of rates and a motion by a municipality to dismiss the petition for lack of jurisdiction. The company sought such investigation under and by virtue of a contract with the municipality, while the municipality claimed that the commission had no jurisdiction since the company had

not complied with the terms of the contract. It was pointed out by the commission that the contract was executed subsequent to the effective date of the Motor Vehicle Act, which gave the commission jurisdiction over such matters. The commission then held that the contract was ineffective, rendering the petition improper. *Re Gary Street Railways, Inc. No. 23414, November 20, 1952.*



Other Important Rulings

THE Georgia commission held that proposed gas rates that would yield a return of 6½ per cent were fair and reasonable. *Re South Atlantic Gas Co. File No. 19440, Docket No. 412-U, December 2, 1952.*

The Massachusetts Department of Public Utilities authorized increased intrastate motorbus rates where the additional revenue would accomplish no more than to offset operating losses in part and where the method by which the increase was distributed did not appear to be unreasonable. *Re Interstate Busses Corp. DPU 10227, December 23, 1952.*

The Indiana commission authorized a water rate increase prior to the installa-

tion of iron removal equipment because the company had made substantial expenditures to insure an adequate supply at a time when earnings were inadequate, the company was entitled to a fair return on property devoted to service, including the iron removal equipment to be installed, and past earning experience indicated that the return question should be presented at the earliest practicable date. *Re Indiana Gas & Water Co., Inc. No. 23616, November 26, 1952.*

The Massachusetts Department of Public Utilities dismissed a complaint against the discontinuance of less-than-carload shipments to a certain station when very few people used such service and the railroad was unable to compete,

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under inflationary conditions, with other means of transportation in meeting the needs of occasional small shippers, and because the discontinuance was part of a reasonable plan for system-wide reorganization in consolidation of facilities. *Millis v. New York, N. H. & H. R. Co.* DPU 9754, December 23, 1952.

The Florida commission held that a gas company entitled to a rate increase should spread the increase over all consumer blocks rather than limit it to certain categories of service. *Re South Atlantic Gas Co. Docket No. 3613-GU, Order No. 1864, January 22, 1953.*

The United States Court of Appeals held that an irregular air carrier's Letter of Registration may be revoked without notice if the carrier has wilfully violated economic regulations. *Air Transp. As-*

sociates v. Civil Aeronautics Board, 199 F2d 181.

The Wisconsin commission authorized a gas company to discontinue service to six scattered rural customers where the excessive cost of serving these persons far outweighed the peculiar advantages of natural gas service and where other adequate types of service for cooking and incidental heating uses were available. *Re Wisconsin Pub. Service Corp. 2-U-3727, January 20, 1953.*

The Louisiana commission held that a proposed increase of 80 per cent in water rates was not fair and equitable and that a 50 per cent increase, which would yield a return of approximately 6 per cent, was adequate. *Ex parte Cullen Water & Develop. Co. Docket No. 5919, Order No. 6009, June 11, 1952.*

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NORTH CAROLINA UTILITIES COMMISSION

Re Nantahala Power & Light Company

Docket No. E-13, Sub 3
December 11, 1952

APPPLICATION by electric company for authority to make a re-connection charge and to increase industrial rates; granted.

Discrimination, § 14 — Rates — Electric company.

1. A public utility is under a legal duty to serve all its customers alike without favor, preference, or discrimination, p. 131.

Discrimination, § 82 — Service to parent company — Private company.

2. A parent company, which is also a customer of a public utility company, is entitled to no preferential treatment in either rates or services but stands in the same position as any other customer and is entitled to every consideration in rates and services given to the other customers, p. 131.

Discrimination, § 104 — Electric rates — Charges for primary and secondary power.

3. An electric company which was charging its parent about the same rates for secondary power as it was charging its other customers for primary power was held not to be discriminating against its other customers, particularly where the effect was lower rates to all customers and the development of cheap dependable power available to a large portion of the rural population constituting the main part of the company's customers, p. 132.

APPEARANCES: R. S. Jones, Attorney at Law, Franklin, for the applicant.

For the protestants: John R. Jordan, Jr., Attorney at Law, Raleigh, for The Mead Corporation; Boyd M. Compton, Attorney at Law, Dayton, Ohio, for The Mead Corporation; John Hill Paylor, Assistant Attorney General, state of North Carolina, Raleigh, for state of North Carolina.

HUNTER, Commissioner: The applicant herein seeks authority (a) to cancel Schedules A and F neither of which are now used, (b) to make a charge of \$2 plus 15 cents per mile traveled in reconnecting meters which have been removed and reinstalled

within a period of twelve months, and (c) to increase the electric rates of its industrial customers whose monthly demand exceeds 50 kilowatts.

Applicant's proposed industrial rate Schedule "PL" is hereto attached marked Exhibit A [omitted herein]. Said rate schedule will apply at present to only sixteen customers and will produce additional gross annual revenue from said sixteen customers of approximately \$35,000, or an average increase in the bills of said sixteen customers of approximately 15 per cent. Under said proposed rate schedule the electric bills of The Mead Corporation, applicant's largest customer, will be increased \$24,131.95 per year, or 17.6 per cent, based upon the kilowatt hours

NORTH CAROLINA UTILITIES COMMISSION

consumed by said corporation during the twelve months ending June 30, 1952. Said corporation, a manufacturer of pulp and paper at Sylva, North Carolina, is the only protestant to the proposed increase in rates, and its protest springs from the relationship between the applicant and its parent corporation, the Aluminum Company of America, herein referred to as Alcoa. During said twelve months' period Alcoa received 309,194,760 kilowatt hours, or 81.65 per cent of the total kilowatt-hour sales made by the applicant, for which it paid 2.3 mills per kilowatt hour which amounted to \$711,147.95, or 47.3 per cent of the total revenue received by applicant from its sales of electric energy. Whether such an arrangement between Alcoa and its subsidiary, the applicant herein, amounts to a preference and an unlawful discrimination in favor of said parent company and to the prejudice of the other customers of the applicant is the principal question presented in this case. The facts shown by the testimony may be summarized as follows:

1. The Nantahala Power and Light Company, applicant herein, is a wholly owned subsidiary of the Aluminum Company of America. Said applicant is a North Carolina corporation which was organized and began business in 1929 and has increased its generating plants, all of which are hydroelectric, from one plant in 1929 with a capacity of 1,400 kilowatts to eight plants at present with a total capacity of 79,435 kilowatts, and has increased its customers from 238 when it began business to 10,000 at present. All of its customers other than Alcoa are located in the extreme western portion of

North Carolina in the counties of Cherokee, Clay, Graham, Jackson, Macon and Swain. Alcoa is located in Tennessee.

2. Approximately 8,000 of the 10,000 customers served by applicant are in the rural areas. It now serves 93 per cent of the population in its service area and is extending its rural distribution lines at the rate of approximately 135 miles annually. The territory it serves is not only predominantly rural and sparsely populated with no large towns and with few industries, but is a very rugged mountain area in which construction and operating costs are high. It has in this area an interconnected transmission system of approximately 151 miles, a distribution system of 1,160 miles of lines, and for the twelve months ending June 30, 1952, had an average net investment of \$17,002,764.46 which includes the usual allowance for working capital. Its income for return on said investment is now negative to the extent of \$41,701, and with the proposed increase in rates its rate of return on said investment will still be negative, or in the red, to the extent of \$26,856. It has reduced its rates many times since it began business in 1929, but has never requested or received an increase in rates and has never paid a dividend on its common stock. It has no preferred stock and no bonded indebtedness.

3. Said sum of \$17,002,764.46 has been advanced by Alcoa from time to time as the applicant's needs require, but Alcoa receives no consideration for its said investment in the applicant's electric plant other than the privilege and obligation of purchasing such power as the applicant has left over after

RE NANTAHALA POWER & LIGHT CO.

serving its other customers. Under the present arrangement between said parties Alcoa pays for such leftover or secondary power two mills per kilowatt hour at the bus bar and pays the applicant an additional transmission rental charge of three-tenths of one mill per kilowatt hour, or a total of 2.3 mills per kilowatt hour. All line losses are borne by Alcoa.

4. The price paid by Alcoa is just about cost. Applicant's production cost per kilowatt hour, including production plant depreciation, all operating expenses of the production plant, and the ad valorem taxes on the production plant, is 1.56 mills per kilowatt hour. Other expenses which may be fairly and properly allocated to Alcoa bring the cost of power purchased by it during the twelve months' period ending June 30, 1952, to 2.2 mills per kilowatt hour, or one-tenth of one mill per kilowatt hour less than the price paid by Alcoa.

5. During World War II, applicant was required by the Federal government to deliver all available power to Alcoa to the exclusion of some of its other customers. This was considered to be primary power and the price to Alcoa was 6.46 mills, or about 1.4 mills higher than the present price to The Mead Corporation. Since the war applicant has sold to Alcoa only secondary power, or only such power as it has left after serving its other customers. The availability of such power in any desired quantity is uncertain and for that reason its price is low as compared with primary power. During the past year TVA has sold secondary power to Alcoa as low as one mill per kilowatt hour.

6. Should Alcoa receive credit on

its power purchases from the applicant, an amount equal to 6 per cent on its investment of \$17,002,764.46 in said applicant company, Alcoa would have paid for secondary power the equivalent of 5.599 mills per kilowatt hour for the 309,194,760 kilowatt hours purchased during the twelve months' period ending June 30, 1952, as compared with 5.09 mills per kilowatt hour paid by The Mead Corporation for primary power and 5.98 mills per kilowatt hour which said corporation would have paid if the proposed rates had been in effect during said twelve months' period. It is also in evidence that Alcoa through the years has furnished and continues to furnish to the applicant engineering service and other technical services at less than cost at which the same may be obtained elsewhere and at much less than its value to applicant.

Conclusions

[1, 2] A public utility is under a legal duty to serve all its customers alike without favor, preference, or discrimination. A parent company which is also a customer stands in the same position as any other customer. It is entitled to no preferential treatment in either rates or services. Regulatory Commissions and the courts have uniformly so held. *Re Aptos Water Co. (Cal) PUR1929C 557*; *Public Utilities Commission v. East Providence Water Co. 48 RI 376, PUR1927C 417, 136 Atl 447*; *Charleston v. Public Service Commission 95 W Va 91, PUR1924B 601, 120 SE 398*; *Re Derby Gas & E. Co. (Conn 1948) 75 PUR NS 114*. But a parent company is entitled to every consideration in rates and services given to other cus-

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tomers. That Alcoa is a large corporation with far-reaching connections and interests that enable it to take all the surplus power generated by the applicant, regardless of quantity and whenever available, should not operate to its prejudice or disadvantage. It is most improbable that any industrial customer other than Alcoa would be willing to obligate itself to purchase secondary power only at any price.

[3] Applying the well-established and well-recognized principle of equity and impartiality between customers to the facts in this case, we find no reason to condemn the arrangement between the applicant and Alcoa by which Alcoa obligates itself to purchase at 2.3 mills per kilowatt hour all power generated by the applicant in excess of the requirements of its other customers. Such an arrangement inures to the benefit of other customers for the reason that it obviates the necessity and expense of standby plants to meet the requirements during years or periods of water deficiency.

The testimony does not disclose any discrimination in favor of Alcoa or that the other customers of the applicant are adversely affected by the relationship or course of dealing between Alcoa and the applicant. Their public utility operations do not follow conventional lines, in that, said public utility business is operated on a cost or no return basis, but to the advantage of all utility customers. Perhaps the purpose of requesting an increase in rates which will still produce insufficient revenue to yield a return on the investment is to effect a saving in taxes, but whatever the purpose, the effect is lower rates to all customers and the development of that part of

Western North Carolina in which said public utility operates. No other section of the state is so favored with cheap dependable power available to such a large portion of the rural population.

The Mead Corporation is in no position to complain about its power rates. It is understandable that it does not welcome a proposal to increase its power bill to the extent of approximately \$2,000 per month, but its rates when measured by any accepted standard are low and with the proposed increase its rates will still be low. In its brief it makes certain comparisons between applicant's rates and the rates of other electric power companies. Companies operate under such different conditions that comparisons have very little value for rate-making purposes, but in comparing rates for such information as such a study reveals we find no industrial plant in North Carolina which now purchases as many kilowatt hours of primary power for as little money as does The Mead Corporation. With the proposed increase in rates it will still be in a position to purchase more power from the applicant for less money than it could under any existing schedule from any other power company operating in North Carolina.

It is in no position to complain about its rates as compared with the rates to Alcoa. It purchases primary power; Alcoa purchases only secondary power. It does not pay for line losses; Alcoa does. It does not have any investment in the applicant company; Alcoa has an investment in said company of approximately \$17,000,000 on which it receives no return, in dividends, or otherwise. Considering its investment

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on which it has a right to earn a fair and reasonable return, it is paying indirectly but paying nonetheless a higher price for secondary power than The Mead Corporation pays for primary power, and with the proposed increase in rates it will still pay about the same price for secondary power that The Mead Corporation will pay for primary power.

There is some question as to whether this Commission or the Federal Power Commission has jurisdiction over rates for power transmitted to Alcoa in Tennessee, but in any view of the facts of this case we are unable to find any unlawful discrimination against the North Carolina customers of the

applicant or any just reason for denying the application for the proposed increase in rates.

It is therefore *ordered* that the Nantahala Power and Light Company be, and it is hereby, authorized (a) to cancel Schedules A and F, (b) to make a charge of \$2 plus 15 cents per mile traveled in reconnecting meters which have been removed and reinstalled within a period of twelve months, and (c) to publish and put into effect Schedule "PL" as set out in Exhibit A hereto attached [omitted herein], said rates and charges to apply on all bills rendered by the applicant from and after the 15th day of December, 1952.

ILLINOIS COMMERCE COMMISSION

Re Panhandle Eastern Pipe Line Company

No. 40415
August 13, 1952

APPPLICATION by natural gas pipeline company for authority to provide direct service to chemical corporation; granted.

Certificates of convenience and necessity, § 121 — Natural gas pipeline company — Direct service to industry.

A natural gas pipeline company was authorized to provide direct natural gas service to a chemical corporation where local distributors in the area were not interested in serving the company, where the service could be interrupted to meet the contract demands of the pipeline company's utility customers and would not affect its ability to serve such customers without curtailment, where the moneys already expended and to be expended by the pipeline company had been and would be paid from current funds on hand, thus obviating the necessity of issuing notes or other securities to finance the construction necessary for the service, where the expenditures would not impair the ability of the pipeline company to provide and maintain facilities necessary to render adequate service to its present customers in the state, and where the service agreement with the chemical corporation was not contrary to the public interest.

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By the COMMISSION: On July 3, 1952, Panhandle Eastern Pipe Line Company (Panhandle) filed a petition for a certificate of public convenience and necessity authorizing it to furnish direct natural gas service to National Petro-Chemicals Corporation (Petro-Chemicals) and to construct the necessary facilities therefor. The matter was set for hearing on July 16, 1952, and notice of the hearing was served upon petitioner as well as upon Citizens Gas Company, Tuscola, Illinois, and Central Illinois Public Service Company, Springfield, Illinois, who were also served with notice of the filing of the petition. At hearings held before a duly authorized examiner of the Commission on July 16 and 17, 1952, a number of witnesses testified for petitioner and many documentary exhibits offered by petitioner were admitted in evidence. On July 17, 1952, the case was marked "Heard and Taken."

Panhandle, a Delaware corporation, is engaged in the business of producing, purchasing, transporting, and selling natural gas. The production areas of the natural gas transported and sold by it are the Amarillo field in the Texas Panhandle and the Hugoton field in Kansas. Panhandle's transportation and distribution system extends from Texas, Oklahoma, and Kansas through Missouri, Illinois, Indiana, and Ohio and terminates in Michigan. Along this system natural gas is sold (a) to local utilities and municipalities owning distribution systems for resale to domestic, commercial, and industrial users, and (b) directly to industrial customers.

The Commission in Case No. 38142 entered an order on December 13, 1951, 92 PUR NS

370 (finding Panhandle to be a public utility subject to regulation by the Commission with respect to its direct sales of natural gas to industrial customers) and directing Panhandle not to undertake to provide direct natural gas service to any additional industrial customers within the state of Illinois without first obtaining a certificate of public convenience and necessity from this Commission. By a supplemental order dated May 16, 1952, Panhandle was granted a certificate of public convenience and necessity authorizing it to transact business consisting of its service to direct industrial customers specifically mentioned in the order.

It appears that National Petro-Chemicals Corporation, a Delaware corporation, is now constructing chemical manufacturing facilities adjacent to Panhandle's Tuscola Compressor Station near the city of Tuscola in Douglas county, Illinois. Panhandle has entered into contracts relating to the financing and operation of the plant of Petro-Chemicals and Panhandle's sale of natural gas and certain hydrocarbons to Petro-Chemicals.

An agreement between National Distillers Products Corporation (National Distillers) and Panhandle dated June 30, 1951, as amended by the supplemental agreement dated April 24, 1952, provides that National Distillers agrees to purchase 1,237,500 shares and Panhandle 825,000 shares of the capital stock of Petro-Chemicals. A total of 2,062,500 shares were thus agreed to be purchased by both parties in the proportion of 60 per cent by National Distillers and 40 per cent by Panhandle. National Distillers and Panhandle further agree to invest ad-

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ditional sums by purchase of additional shares of stock or by loans in the same 60-40 per cent proportion and, if additional funds should be required together with the sum of \$22,000,000 to be loaned by banks in order to complete the contemplated construction program of Petro-Chemicals or to maintain its working capital as required by the lending banks, to supply further sums in the same proportion through purchase of stock or by loans. Panhandle became obligated by the contract with National Distillers to pay \$5,775,000 for 825,000 shares of capital stock of Petro-Chemicals, to invest an additional \$1,707,328 by purchase of additional shares of stock or by loans and, if further sums should be required as described, to invest an additional \$1,200,000.

A contract entitled "Agreement of Purchase and Sale" was entered into between Panhandle and Petro-Chemicals on August 1, 1951, and amended by supplemental agreement dated May 26, 1952. Panhandle agreed for a 20-year period beginning with the date of initial deliveries to sell and deliver daily 21,000 thousand cubic feet of ethane and heavier hydrocarbon gases at a price of $28\frac{1}{2}$ cents per thousand cubic feet, to sell natural gas to Petro-Chemicals for use as fuel at a price of $28\frac{1}{2}$ cents per thousand cubic feet in daily volumes of 7,000 thousand cubic feet during the 7-month period from September 16th to April 15th, and 24,000 thousand cubic feet during each 5-month period from April 16th through September 15th, and to operate and maintain an extraction plant to be constructed by Petro-Chemicals for the extraction of ethane and heavier hydrocarbon gases from Pan-

handle's natural gas. In the contract Petro-Chemicals agreed to construct the extraction plant to be operated by Panhandle, to reimburse Panhandle for all its expenses in operating and maintaining the extraction plant, and to construct fractionation and chemical plants to be operated by Petro-Chemicals, all of the plants to be located on a tract of land near Panhandle's Tuscola Compressor Station. Petro-Chemicals also agreed to take or pay for certain minimum quantities of hydrocarbons and natural gas amounting approximately to 75 per cent of the quantities agreed to be delivered by Panhandle when Petro-Chemicals' plants commence full operation.

In connection with a credit agreement entered into on September 17, 1951, between Petro-Chemicals and The New York Trust Company, Bankers Trust Company, Continental Illinois National Bank and Trust Company of Chicago, and the National City Bank of New York, as supplemented by an agreement dated April 24, 1952, between Petro-Chemicals and the same banks with the addition of The Chase National Bank of the city of New York, Panhandle executed a so-called "Letter of Representation and Agreement" dated September 17, 1951, and an amendment thereto dated April 24, 1952. Panhandle executed the letter agreement and its amendment in order to induce the banks to lend \$22,000,000 to Petro-Chemicals and agreed, among other things, to subordinate any indebtedness of Petro-Chemicals to Panhandle to the holders of the notes to be issued under the credit agreement between the banks and Petro-Chemicals.

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It appears from the evidence that the manufacturing facilities of Petro-Chemicals near Tuscola will consist of 3 general units. The extraction plant will remove from the natural gas in one of Panhandle's pipelines all of the ethane and essentially all of the propane, butane, and other heavier components. The removed hydrocarbons will then pass in a mixed liquid from there to the fractionation unit where the hydrocarbons will be separated into ethane, propane, butane, iso-butane, and natural gasoline. Except for the ethane, the resulting products will be stored for eventual sale. The ethane will be piped to a third unit, the chemical plant, where there will be three processes, one a cracking process that will convert the ethane into ethylene, another an alcohol plant converting ethylene into industrial synthetic alcohol, and the third an ethyl-chloride plant where the ethylene will be reacted with hydrogen and chlorine to form ethyl-chloride.

It appears that Petro-Chemicals estimates that its plants near Tuscola will cost more than \$40,000,000. The funds required for construction and working capital have been and will be raised by sales of stock to Panhandle and National Distillers in an amount not exceeding \$22,000,000 and by borrowings from banks in amounts totaling \$22,000,000, shown by the contracts in evidence. At the time of the hearing approximately \$10,000,000 had been expended for property and equipment, and Petro-Chemicals had raised approximately \$6,500,000 from sales of stock to Panhandle and National Distillers and \$5,500,000 by loans from the banks.

Of the natural gas purchased as fuel by Petro-Chemicals from Panhandle 7,000 thousand cubic feet will be used daily as fuel in the extraction and ethylene plants and places where gas has a peculiar advantage. In the extraction plant accurate temperature control is essential in heating oil to drive off hydrocarbons that the oil has absorbed. In the cracking of ethane into ethylene accurate temperature control is also required since deposits of carbon will be excessive if the temperature is too high, and the ethane will not be cracked when the temperature is too low. During the 5-month period, April 16th through September 15th, 17,000 thousand cubic feet will be used daily as fuel in the boiler station. There will be three boilers each with a capacity of 200,000 pounds of steam per hour when coal is used as fuel and 265,000 pounds per hour when gas is used as fuel. Petro-Chemicals' steam requirements of 550,000 pounds per hour will be met during the seven winter months by operating the three boilers with coal and in the five summer months by operating two boilers with gas while one boiler is off the line for reconditioning.

It appears that Petro-Chemicals' plants near Tuscola, when operating at full capacity, will produce for sale liquid hydrocarbons consisting of 360,000 gallons per day of propane, which will be used as fuel in busses and tractors and residential uses where gas is not available and for use as fuel in industrial operations, 50,000 gallons per day of butane, which is used for purposes similar to propane; 25,000 gallons per day of iso-butane, which is one of the components of

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high test aviation gasoline; and 17,000 gallons per day of natural gasoline, which is used in automobiles. These quantities will amount to approximately 45 tank cars per day of liquid hydrocarbon products. There is no natural source of large volumes of liquid hydrocarbons within 150 miles of Tuscola and the present supply is inadequate to serve the Illinois and Indiana markets. The estimated production of ethylene will be 300 tons per day, which will be converted into chemicals with the production estimated at 40,000,000 gallons per year of industrial alcohol, 50,000,000 pounds per year of ethyl-chloride, and 3,500,000 to 4,000,000 gallons per year of ether with lesser quantities of benzene solvents and other by-products.

In connection with the allocation of materials for the construction of Petro-Chemicals' plant and the acceleration of depreciation thereof, two agencies of the United States Government, the Petroleum Administration for Defense and the Defense Production Administration, have approved the construction of the plant and the Petroleum Administration for Defense has indicated the desirability of completing the extraction plant by December 15, 1952, to avoid a shortage of hydrocarbons in this area during the winter season of peak demand.

It appears that Petro-Chemicals estimates that it will have a permanent force of 350 to 400 employees who, except for technical personnel numbering about 50, will be drawn from Tuscola and neighboring towns, there being no major industrial plant within 30 miles of Tuscola. According to the testimony of the president of the chamber of commerce of Tus-

cola, business conditions in and around Tuscola will be benefited by the Petro-Chemicals' plant. Now in the center of a wealthy agricultural area, Tuscola's economic base is expected to be broadened and balanced by the addition of this major industry to the benefit of the entire community.

The sales agreement between Panhandle and Petro-Chemicals sets a price of 28½ cents per thousand cubic feet for ethane and heavier hydrocarbon gases delivered to Petro-Chemicals as well as for natural gas to be used as fuel in the extraction and chemical plants. This price will be subject to adjustment by an escalator clause in the agreement that provides for an increase or decrease related to the increase or decrease in the field price paid by Panhandle for natural gas purchased by it. The price set in the contract resulted from negotiations between representatives of Panhandle and Petro-Chemicals in which the factors included the type of service, the use of the gas, the price of competitive fuels, and the price paid for similar commodities by competitors of Petro-Chemicals. The hydrocarbon gases will be purchased by Petro-Chemicals while they are in the gas stream, and it is estimated by Petro-Chemicals that the expense of extraction and fractionation will result in a final cost to it of at least 60 cents per thousand cubic feet for the hydrocarbons.

It appears that in the negotiation of the sales agreement between Panhandle and Petro-Chemicals a 20-year term was insisted upon by representatives of Petro-Chemicals because the large expenditures in constructing the plant could not be justified and the financing of the large expenditure

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could not be obtained if the agreement provided for a shorter term.

The sales agreement between Panhandle and Petro-Chemicals provides that, if the heating value content of Panhandle's natural gas streams on the discharge side of the Tuscola Station is reduced below 975 BTU per cubic foot, Panhandle may require Petro-Chemicals to return such quantities of gases heavier than ethane as may be required to raise the heating value content of Panhandle's natural gas streams to a minimum of 975 BTU per cubic foot. This minimum contract requirement will enable Panhandle to comply with the provisions of Panhandle's tariff now on file with the Federal Power Commission governing its sales for resale to utility distributors which provides that natural gas delivered by Panhandle shall not have a total heating value above 1,050 or below 950 BTU per cubic foot and that Panhandle's charges for natural gas shall be decreased if the average total heating value of gas delivered in any month is less than 975 and shall be increased if the heating value is more than 1,025 BTU.

Panhandle's tariff on file with the Federal Power Commission provides for a demand and commodity form of rate and general terms and conditions of service with respect to sales of natural gas for resale to its utility customers. Under the tariff Panhandle enters into service agreements with its utility customers which nominate the maximum volumes of gas which Panhandle is obligated to deliver, and all of Panhandle's utility customers in Illinois have entered into such service agreements with Panhandle. It appears that beginning October 1, 1951,

the sales capacity of Panhandle was greatly increased, particularly by the addition of gas received from its subsidiary Trunkline Gas Company. There is a wide variation between the requirements of gas set forth in the contract demands of Panhandle's utility customers and the volumes of gas actually taken by the customers during the past winter period. This results from varying temperature changes from day to day which have a direct relationship to the house-heating loads of utility distributors. Since Panhandle's capacity is able to meet current peak-day requirements which occur on relatively few days during the winter season, Panhandle has a problem of disposing of so-called "off-peak" gas. Witnesses for Panhandle stated it will have sufficient quantities of gas available to make the deliveries to Petro-Chemicals of 7,000 thousand cubic feet per day during the 7-month period from September 16th through April 15th and 24,000 thousand cubic feet per day during the 5-month period from April 16th through September 15th and that its proposed deliveries to Petro-Chemicals will not impair its ability to meet the contract demands of its present customers.

The sales agreement between Panhandle and Petro-Chemicals provides that the gas sold under the contract is contemplated to be an uninterruptible supply but that, if a shortage of gas should occur on any point of the pipeline system of Panhandle, Panhandle shall first, so far as practicable, curtail or interrupt deliveries of gas to customers purchasing gas from Panhandle on an interruptible basis and thereafter shall have the right to curtail and interrupt to the extent reason-

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ably necessary in the judgment of Panhandle. It appears from the testimony that both Panhandle and Petro-Chemicals contemplate that this provision of the contract permits Panhandle to interrupt deliveries of 7,000 thousand cubic feet during the seven winter months and the 24,000 thousand cubic feet during the five summer months when required by a gas shortage and that the interruptions of gas supply to Petro-Chemicals will be made before curtailment of the contract demands of Panhandle's utility customers. The record thus shows that Panhandle's natural gas service to Petro-Chemicals may be interrupted to meet the contract demands of Panhandle's utility customers and will not affect Panhandle's ability to serve such customers without curtailment.

Local gas utility distributors located nearest to the site of the Petro-Chemicals plant are the Citizens Gas Company at Tuscola and the Central Illinois Public Service Company at Mattoon. Each of these companies has indicated that it has no interest in providing natural gas service to Petro-Chemicals' plant near Tuscola.

Sections 8(a) and 27 of the Illinois Public Utilities Act require that certain transactions by public utilities with affiliated interests shall be consented to and approved by the Commission. Contracts admitted in evidence include (a) the agreement between National Distilleries Products Corporation and Panhandle dated June 30, 1951, as amended by the supplemental agreement dated April 24, 1952, (b) the agreement of purchase and sale between Panhandle and Petro-Chemicals

dated August 1, 1951, and amended May 26, 1952, and (c) the letter of representation and agreement of Panhandle dated September 17, 1951, addressed to certain banks and the amendment thereto dated April 24, 1952. Counsel for Panhandle have stated on the record that it was Panhandle's position that § 8(a) of the act did not require Commission approval of the contracts in evidence but that it wished to avoid any disputed jurisdictional question in this proceeding and would not object if the Commission should assert jurisdiction over the contracts. It appears that moneys already expended and to be expended by Panhandle under these agreements have been and will be paid by Panhandle from current funds on hand and that it is not Panhandle's intention to issue notes or other securities to obtain funds to make these expenditures. It also appears that the expenditures of funds required by the contracts described above as well as the other provisions of said contracts will not impair in any way the ability of Panhandle to provide and maintain facilities necessary to render adequate service to its present utility and industrial customers in the state of Illinois. The agreements described above are not contrary to the public interest and should be consented to and approved by the Commission.

It appears that Panhandle will construct a fuel measuring station to measure the natural gas to be sold by it as fuel to Petro-Chemicals under the sales contract and that the estimated cost of the fuel gas measuring station is \$27,000.

The Commission, having considered all the evidence presented in this pro-

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ceeding and being fully advised in the premises, is of the opinion and finds that:

(1) the petitioner, Panhandle Eastern Pipe Line Company, is a public utility within the meaning of § 10 of the Public Utilities Act, and is subject to regulation by this Commission with respect to its direct sales of natural gas to industrial customers;

(2) the recitals of fact hereinabove set forth are supported by the evidence in the record in this proceeding and are hereby adopted as findings of fact;

(3) notice of the petition, and of the hearing thereon, was duly and properly served on Citizens Gas Company and Central Illinois Public Service Company, the only local utilities engaged in the distribution of gas in the Tuscola area;

(4) public convenience and necessity require that Panhandle should transact the business of rendering direct natural gas service to Petro-

Chemicals and construct the necessary facilities therefor and that a certificate of convenience and necessity should be granted Panhandle for said purposes; and

(5) since the agreement between National Distillers Products Corporation and Panhandle dated June 30, 1951, as amended by the supplemental agreement dated April 24, 1952, the agreement of purchase and sale between Panhandle and Petro-Chemicals dated August 1, 1951, and amended May 26, 1952, and the letter of representation and agreement of Panhandle dated September 17, 1951, addressed to certain banks and the amendment thereto dated April 24, 1952, will not impair Panhandle's ability to serve its public utility company's customers in Illinois or Panhandle's ability to provide facilities necessary to furnish adequate service in this state, such contracts should be consented to and approved by the Commission.

NEW YORK PUBLIC SERVICE COMMISSION

Re Levitt & Sons, Incorporated, et al.

Cases 15530, 15588
December 9, 1952

PROCEEDING for determination of Commission jurisdiction over building corporation in respect to its ownership and operation of a water system and petition for approval of transfer of system to a water district; Commission found to have jurisdiction, but retroactive approval of transfer denied.

Public utilities, § 122 — Status of building corporation operating water system.

1. A building corporation operating a water system for the occupants of homes which it had constructed in a large housing project was found to be a public utility, despite the fact that the corporation had installed and

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operated the system pursuant to a contract providing for its eventual transfer to a water district and that no charge was made for water service, where the building corporation fell within the definition of a waterworks corporation in the New York State Public Service Law and, therefore, was subject to Commission regulation, p. 141.

Consolidation, merger, and sale, § 13 — Transfer of water plant to a water district.

2. The requirement that Commission approval be obtained for a transfer of a water plant to a water district is strictly construed because of the material effect which such a transfer might have on the rights and interests of the public, p. 143.

Consolidation, merger, and sale, § 25 — Commission approval — Retroactive application.

3. The Commission will not grant retroactive approval to the transfer of a water system by a building corporation to a water district in the absence of special circumstances, notwithstanding the fact that had a timely application been made the facts and circumstances would have compelled Commission approval in the public interest, p. 143.

APPEARANCES: Lawrence E. Walsh, Counsel (by John T. Walsh, Associate Attorney, Joseph Doran, Assistant Counsel, Sidney Kabalkin, Associate Attorney), for the Public Service Commission; Ira G. Goldman, Manhasset, Vice President and General Counsel, Levitt and Sons, Inc.; George R. Brennan, Town Attorney (by Palmer D. Farrington), Hempstead, for the town of Hempstead; Herbert H. Halperin, Wantagh, Chairman, Water Committee, Wantagh-Levittown Civic Association; Milton Costello, Wantagh, for Water Committee, Wantagh-Levittown Civic Association; George S. Heller, Wantagh, for Wantagh-Levittown Civic Association.

By the COMMISSION:

[1] Case 15530 is an investigation instituted by the Commission to inquire into the ownership, operation, and transfer of waterworks systems by Levitt & Sons, Inc. (Levitt), and its president, William J. Levitt. The second proceeding is one commenced on the application of Levitt to obtain

the consent of the Commission for the transfer of a waterworks system to Levittown Water District.

At the hearing scheduled in the latter proceeding, Levitt, through counsel, declined to present proof in support of its application, contending that the operation and transfer of the system were not subject to regulation.

Hearings were held in the investigation proceeding, and, notwithstanding the position taken in the other case, Levitt co-operated fully by furnishing all requested information and permitting its books and records to be examined by the staff of the water bureau. The available information so obtained was received in evidence through testimony and documentary exhibits presented by officers of Levitt and a member of the staff of the water bureau. The facts as developed may be summarized as follows:

Levitt is a domestic corporation which has been engaged for some years in the construction of houses on a large scale. In 1946 it commenced the construction of a housing project in

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Nassau county in an area known as Levittown. The construction continued from 1946 until the entire project was completed in 1951. Approximately 17,500 houses were constructed, consisting of one-family dwellings. At first, the houses were rented, but eventually all were sold by Levitt. The monthly rentals and sales prices were substantially uniform.

As the vast project developed in stages throughout this period, waterworks systems were installed to furnish water for domestic use by occupants of the houses, for fire protection, and for use by business tenants in shopping centers.

The systems fall within these categories: (1) systems installed, owned, and operated by Levitt to furnish water to the occupants of houses in portions of Levittown, which systems were transferred in October, 1950, to the Levittown and Island Trees Water Districts. These systems comprise substantially the plant involved in the transfer for which Levitt applied to obtain the consent of the Commission; (2) the system installed, owned, and operated by Levitt to furnish water exclusively to its business tenants in the shopping centers; (3) other water systems installed in other areas of Levittown to furnish water to occupants of houses. These systems were not owned or operated by Levitt.

During the period of operation by Levitt from 1947 to October, 1950, of the system transferred in the latter month to the Levittown and Island Trees Water Districts, no charge was made for water service. During that period Levitt filed short-form annual reports with the Commission. Likewise, no charge has been made by

Levitt for the water furnished to its business tenants. The service so furnished has, from all indications, been adequate.

In 1947 Levitt entered into an agreement with the town of Hempstead covering the installation, operation, and eventual transfer of the system transferred in October, 1950, to the Levittown and Island Trees Water Districts. Pursuant to the terms of such agreement, Levitt transferred the distribution system to the districts for a nominal consideration of one dollar. The developed cost of such facilities was \$1,589,407. The production facilities were installed at a cost of \$397,900 and, in accordance with the agreement, Levitt received one-half of such cost as consideration for the transfer.

During its operation of that system Levitt did not maintain separate records reflecting the cost of operation. However, estimates submitted by it indicate the annual operating costs approximated \$30,000. According to the testimony of an officer of Levitt, the rents paid by tenants were fixed without consideration to the cost of installing or operating the water plant transferred in 1950. On the other hand, the same officer testified that consideration was given to the cost of the system in fixing the sales prices of the houses, although the precise effect of such consideration on the sales prices was not available.

Discussion and Conclusion

The contention of counsel for Levitt that the operation and transfer of the system transferred in 1950 to the Levittown and Island Trees Water Districts were not subject to regula-

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tion by this Commission must be rejected.

During the period of such operation and at the time of the transfer Levitt was a waterworks corporation as defined by the Public Service Law. It thereby became subject to regulation by this Commission. In addition, the consent of the Commission was required under § 89-h of the Public Service Law for the transfer of the water plant to the water districts in October, 1950. The rights and interests of the public are materially affected by a transfer of utility plant, and accordingly the requirement for consent of the Commission therefor has been strictly construed, even where a plant is transferred to a municipality whose operations are exempted from regulation (Spring Brook Water Co. v. Hudson Falls [1945] 269 App Div 515, 60 PUR NS 314, 56 NYS2d 722).

None of the surrounding circumstances, including the contractual arrangement between Levitt and the town of Hempstead, and the furnishing of water without charge, exempted the operations and transfer of the water system by Levitt from regulation by this Commission.

[2, 3] The approval of this Commission was not sought until long after the transfer had been made. Had a timely application been made, the facts and circumstances would indicate that the public interest would have compelled our approval. This Commission has long held that it would not grant retroactive approval in the absence of special circumstances. No such circumstance exists here, and since no penalty is indicated for technical violation of the statute, these proceedings should be closed.

SECURITIES AND EXCHANGE COMMISSION

Re Ohio Valley Electric Corporation et al.

File No. 70-2945, Release No. 11578
November 7, 1952

APPPLICATION for approval of plan to finance new operating companies to furnish electric energy for atomic energy project; granted subject to reservation of jurisdiction.

Consolidation, merger, and sale, § 19 — National defense — Atomic energy program.

1. Holding and operating utility companies were authorized to acquire stock of two new operating electric companies to finance the construction of generating stations to supply the power requirements of a gaseous diffusion plant of the Atomic Energy Commission in view of the needs of national defense, without definitive resolution of the issues involved under § 10 of the Public Utility Holding Company Act, 15 USCA § 79j, subject, however, to a

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retention of jurisdiction over the question of whether the retention of such interests might be allowed after the conclusion of an existing national emergency, p. 150.

Security issues, § 99 — Common stock — Large debt structure.

2. A subsidiary operating electric company formed to furnish power for a new atomic energy project was authorized to issue common stock under an arrangement whereby the common stock would constitute approximately 5 per cent of the capital structure, with the remaining capital to be supplied from the sale of debt securities, in view of the importance of the project from the standpoint of national defense and in view of protective provisions of a power contract between the company and the United States Government, p. 151.

Intercompany relations, § 15 — Service company — Services at cost.

3. A subsidiary service corporation in a holding company system, presently serving subsidiaries of that system, was authorized to render at cost engineering and other services to two new operating utilities in connection with the construction of generating stations and related facilities to supply the power requirements of a gaseous diffusion plant of the Atomic Energy Commission, in view of the importance of the atomic energy program, p. 152.

APPEARANCES: Charles V. Graham and Richard M. Dicke, of Simpson Thacher & Bartlett, for Ohio Valley Electric Corporation and American Gas and Electric Company; Oliver B. Merrill, of Sullivan & Cromwell, for The West Penn Electric Company; Hayden N. Smith, of Winthrop, Stimson, Putnam & Roberts, for Ohio Edison Company; Paul S. Davis, for the Division of Public Utilities of the Commission.

By the COMMISSION: This proceeding presents for our consideration one of the largest and most significant developments in the public utility industry. The Atomic Energy Commission is constructing a new gaseous diffusion plant a few miles north of Portsmouth, Ohio. The annual energy requirements of the new project are estimated at approximately 15 billion kilowatt hours, the largest amount of power required by or supplied to any single plant in the world. The Atomic Energy plant will operate

continuously and will require approximately 1,800,000 kilowatts of firm power at a load factor of approximately 95 per cent. The tremendous amount of electric energy required for this project may be appreciated by noting that the electric energy requirements exceed by 25 per cent the total amount of energy used by the city of greater New York, with a population of approximately 8,000,000.

The requirements of national defense necessitate that the new Atomic Energy project be completed and in operation as expeditiously as possible. As the project is completed, increasing amounts of electric power will be used. For this purpose, the Atomic Energy Commission will need a supply of interim power, to be obtained from existing facilities, until such time as new generation is available. The total power requirements including such interim power are estimated at 16,100 kilowatts on July 1, 1953, 27,000 kilowatts on July 1, 1954, 723,000

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kilowatts on July 1, 1955, 1,174,000 kilowatts on December 1, 1955, and increasing amounts until the full requirements of 1,800,000 kilowatts are supplied on and after November 1, 1956.

The electric energy requirements for this project far exceed the normal capabilities of any single presently operating public utility company. To do the job, the Atomic Energy Commission invited proposals from a group of public utility companies which serve the Ohio valley area and the general area of the country surrounding the location of the new project. After extensive studies, discussions, and negotiations, a proposal was submitted to the Atomic Energy Commission by fifteen operating utility companies. It is stated that the electric system of each of these companies is already directly or indirectly interconnected with the system of every other company in the group, and that additional interconnections are feasible. The Atomic Energy Commission accepted the proposal of such companies, and those financial aspects of the proposed transactions subject to our jurisdiction are now before us for consideration.

Economical and efficient generation of electric energy on a large scale requires, where hydro facilities are not available, location close to available fuel sources. In addition, a large generating station requires substantial amounts of water for condensing and cooling. With these needs in mind, and considering also the presently existing generating and transmission facilities in the Ohio valley area, it was determined to build two new generating stations, one on the Ohio river, at some point between Portsmouth and

Marietta, Ohio, and the other in southeastern Indiana, on the Ohio river at some point between New Albany and Lawrenceburg, Indiana. The Ohio generating station would have five turbo-generators, each with an expected capability of 200,000 kilowatts, or a total of 1,000,000 kilowatts; the Indiana generating station would consist of six turbo-generators of the same size, or a total of 1,200,000 kilowatts, making a total for both stations of 2,200,000 kilowatts. The two generating stations would be connected with the Atomic Energy plant and with certain existing facilities of the sponsoring companies by 330,000-volt transmission lines.

The principal corporate instrument for supplying the electric energy requirements for the new project is the Ohio Valley Electric Corporation, a new public utility company organized under the laws of Ohio. Ohio Valley Electric Corporation ("Ohio Valley") would own the generating station in southeastern Ohio, the bulk of the transmission lines, and would own all of the capital stock of another new company, Indiana-Kentucky Electric Corporation ("Indiana-Kentucky"). Indiana-Kentucky in turn would own the generating station and other facilities within the state of Indiana.

The common stock of Ohio Valley would be owned by the operating companies, or holding companies controlling such operating companies, comprising the sponsoring group of companies. The sponsoring companies, under the power contract, undertake to supply interim power to the Atomic Energy project pending construction and completion of the new generating facilities. In addition, the

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sponsoring companies will supply supplemental power required by the Atomic Energy project after completion of the new generating facilities and will use any surplus power available from the new facilities and not required by the new Atomic Energy project.

The names of the holding companies and operating companies comprising

the sponsoring group, together with the percentages of ownership of the stock of Ohio Valley and the percentages of participation for power supply and utilization purposes, are as follows (showing in each case subsidiaries of holding companies after and indented from their respective parent companies):

Name of Company	Equity Participation Ratio—Per Cent	Power Participation Ratio—Per Cent
American Gas and Electric Company ("American Gas")	37.8	—
Appalachian Electric Power Company ("Appalachian")	—	15.2
Indiana & Michigan Electric Company ("Indiana & Michigan")	—	7.6
The Ohio Power Company ("Ohio Power")	—	15.0
The Cincinnati Gas & Electric Company ("Cincinnati")	9.0	9.0
Columbus and Southern Ohio Electric Company ("Columbus")	4.3	4.3
The Dayton Power and Light Company ("Dayton")	4.9	4.9
Kentucky Utilities Company ("Kentucky")	2.5	2.5
Louisville Gas and Electric Company ("Louisville")	7.0	7.0
Ohio Edison Company ("Ohio Edison")	16.5	14.5
Pennsylvania Power Company ("Pennsylvania")	—	2.0
Southern Indiana Gas and Electric Company ("Southern Indiana")	1.5	1.5
The Toledo Edison Company ("Toledo")	4.0	4.0
The West Penn Electric Company ("West Penn Electric")	12.5	—
Monongahela Power Company ("Monongahela")	—	3.5
The Potomac Edison Company ("Potomac")	—	2.0
West Penn Power Company ("West Penn Power")	—	7.0

Of the foregoing companies, American Gas, West Penn Electric, and Ohio Edison are registered holding companies; Cincinnati, Kentucky, and Louisville are public utility companies and holding companies presently exempt from certain provisions of the act,¹ and Columbus, Dayton, Southern Indiana, and Toledo are operating public utility companies not subsidiaries of any holding companies.

The cost of the electric facilities proposed to be constructed by Ohio Valley

and its subsidiary is estimated to be between \$370,000,000 and \$440,000,000. The agreement with the Atomic Energy Commission provides that approximately 95 per cent of the funds be secured by the sale of Ohio Valley of debt securities and that the equity capital be limited to the remaining 5 per cent, or approximately \$20,000,000. The proposed equity securities to be issued by Ohio Valley will consist of not to exceed 200,000 shares of common stock, having a par value

¹ Cincinnati is exempt as a holding company by virtue of having filed a statement with the Commission pursuant to Rule U-2 claiming exemption from the provisions of the act. Kentucky and Louisville were granted exemptions as holding companies pursuant to § 3

(a) (2) of the act, 15 USCA § 79c (a) (2), by orders of the Commission. Re Kentucky Utilities Co. Holding Company Act Release No. 9017, April 19, 1949; Re Louisville Gas & E. Co. (1936) 1 SEC 539.

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of \$100 per share. This stock will be sold at par to the participating companies in the ratios set forth above. Of this common stock, Ohio Valley proposes to issue 40,000 shares initially, of which the proceeds will be used to proceed with the acquisition of land and land rights and with excavation and preliminary construction operations. The remaining shares of common stock will be issued from time to time, prior to January 1, 1957, as required in connection with the construction program. Indiana-Kentucky will issue not in excess of 100,000 shares of its common stock, without par value, which will be acquired by Ohio Valley at a price of \$200 per share prior to January 1, 1957, as funds are required.

The debt securities included in the program will be sold by Ohio Valley to institutional investors and banks, subject to our authorization. It is contemplated that six-sevenths of the proposed new debt securities will consist of first mortgage and collateral trust bonds, which will be secured by a first lien on the properties of Ohio Valley and will also indirectly, through a collateralization arrangement, constitute a lien on the properties of Indiana-Kentucky. The remaining debt will consist of unsecured notes having serial maturities. The bonds will be issued to insurance companies and the unsecured notes to banks. The definitive terms of the debt securities, which have not yet been determined, will be set forth in the application to be filed at an appropriate time with the Commission. However, it appears that as presently contemplated the secured debt will have an ultimate 25-year maturity, subject to semiannual retirements

through a sinking fund, and the unsecured notes will have serial maturities extending over a 10-year period. It is expected that the interest rate on the bonds will be $3\frac{3}{4}$ per cent, and on the notes 4 per cent. As presently anticipated, by operation of the sinking fund and the serial maturities, all debt will be ultimately retired within a 25-year period, by equal annual payments covering interest and principal retirements.

A power agreement has been entered into between the Atomic Energy Commission and Ohio Valley providing for the construction and operation by Ohio Valley of the necessary facilities and the supply of the power requirements of the Atomic Energy plant. The agreement is for a 25-year period, subject to prior termination and to extension under certain conditions. The basic rate payable by the government for the power is calculated so that the government will pay approximately 97 per cent of the entire cost of operation, including interest, amortization of debt capital, income and other taxes, plus a return of 8 per cent on equity capital actually invested. Provisions are made for termination of the power agreement by the Atomic Energy Commission at any time. In the event of termination after the commencement of full operation of all the generating units to be constructed, Ohio Valley will be entitled to receive from the Atomic Energy Commission cancellation charges designed to cover the fixed costs and fixed operating expenses for a specified period of time. If the agreement is terminated prior to full operation, Ohio Valley will be entitled to reimbursement of all expenditures made and costs of cancella-

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tion of commitments with respect to facilities not to be completed, and, with respect to facilities to be completed, to receive during a 2-year period after notice of termination the fixed costs and fixed operating expenses applicable to facilities then in commercial operation and, at the expiration of the 2-year period, cancellation charges equal to the sum of (1) an amount designed to meet fixed costs and fixed operating expenses for a specified period thereafter and (2) an amount designed to give effect to extraordinary construction expenditures encountered by virtue of the completion of only a portion of the total facilities.²

There will also be a contractual arrangement between Ohio Valley and the operating companies comprising the sponsoring group which will provide for the supply by the sponsoring companies of interim and supplemental power to Ohio Valley for resale to the Atomic Energy Commission and the purchase by the sponsoring companies of power not required by the Atomic Energy Commission, including power available because of termination, on the same terms as the power purchased from Ohio Valley by the Atomic Energy Commission.

Our functions in this matter are limited to those matters affecting registered holding companies, certain other holding companies, and subsidiary companies of registered holding companies, as to which jurisdiction is conferred on us by Congress in the

Public Utility Holding Company Act of 1935. We do not in any sense pass upon the activities of the Atomic Energy Commission, a co-ordinate agency of the Federal government. In performing our statutory functions under this act, however, we are expressly required to consider the "public interest," and in doing so we, of course, give paramount weight to the needs of national defense.

The present proceeding was instituted by the filing of an application-declaration by nine companies. The three registered holding company applicants (American Gas, West Penn Electric, and Ohio Edison), and the three other holding company applicants (Cincinnati, Kentucky, and Louisville) have applied for approval of their respective acquisitions of Ohio Valley common stock, and Ohio Valley has applied for approval of its proposed acquisition of Indiana-Kentucky common stock. Approval of these acquisitions is sought under § 9(a) of the act, 15 USCA § 79i(a), which requires that acquisitions meet the standards of § 10. The acquisitions by the three registered holding companies and by Ohio Valley are subject to the requirements of § 9(a)(1), dealing with acquisitions by registered holding companies and their subsidiaries. The acquisitions by Cincinnati and Louisville are subject to the requirements of § 9(a)(2), which regulates acquisitions by any company or person of over 5 per cent of the stock of a public utility company,

²Under the terms of the Supplemental Appropriation Act of 1953, the Atomic Energy Commission is limited in the total amount of cancellation charges which it may authorize, to a maximum of \$57,000,000, of which that Commission has allocated \$40,000,000 to this particular contract. The Atomic Energy Commission has represented that it will seek con-

gressional authority to modify this provision for future years, in order to enable that Commission to undertake an obligation for the more comprehensive termination arrangements which are provided for in the contract subject to such congressional authority. Unless that legislation is secured, the present contract will be terminated.

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in situations where an affiliated relationship exists or will exist with such company and another public utility or holding company. Kentucky has also requested approval of its proposed acquisition of Ohio Valley stock, pursuant to Rule U-100(b) and § 9(a) (1) of the act.

Of the remaining sponsoring companies, Appalachian, Indiana & Michigan, and Ohio Power are subsidiaries of American Gas; Monongahela, Potomac, and West Penn Power are subsidiaries of West Penn Electric; and Pennsylvania is a subsidiary of Ohio Edison. None of these subsidiaries are acquiring securities of Ohio Valley. The other sponsoring companies (Columbus, Dayton, Southern Indiana, and Toledo) are public utility operating companies, not subsidiaries of any holding company. Since none of the latter four companies are acquiring as much as 5 per cent of the stock of Ohio Valley, their respective acquisitions are not subject to our approval.

The two new companies, Ohio Valley and Indiana-Kentucky, will, by virtue of the proposed transactions, become subsidiaries of each of the three registered holding company applicants, American Gas, West Penn Electric, and Ohio Edison.³ Ohio Valley and Indiana-Kentucky propose to issue new securities, and approval is sought at this time of the issuance of common stock. As indicated above, the proposed debt securities will be the sub-

ject of a further application. The issuance of these securities must meet the applicable standards of §§ 6 and 7 of the act, 15 USCA §§ 79f, 79g.

The remaining applicant, American Gas and Electric Service Corporation ("Service Corporation") is a service company subsidiary of American Gas. It seeks approval of the proposed arrangements under which it will render services to Ohio Valley and Indiana-Kentucky, in accordance with our jurisdiction under § 13 of the act, 15 USCA § 79m.

During the course of negotiations between the sponsoring companies and the Atomic Energy Commission, certain aspects of the matter were presented to us informally. Without in any way passing upon matters not then formally before us, we made such suggestions as might be helpful, and among other things, directed attention to the provisions of the second sentence of 11(b)(2) of the act, the so-called "great-grandfather clause." This clause forbids the permanent existence in a holding company system of more than three layers of companies. Under the original proposals, all of the sponsoring operating companies, including those which are themselves subsidiary companies of registered holding companies, would have owned directly stock of Ohio Valley. In the light of these informal conversations the program was modified to provide that as to such subsidiaries the Ohio Valley

³ Ohio Valley will become a holding company as defined in § 2 (a) (7) of the act, 15 USCA § 79b (a) (7), at such time as Indiana-Kentucky becomes a public utility company. Ohio Valley has, pursuant to Rule U-2, filed a statement claiming exemption as a holding company on Form U-3A-2. The claim for exemption is based upon the provisions of § 3 (a) (2) of the act permitting exemptions (subject to certain conditions) for any holding

company which is "predominantly a public utility company whose operations as such do not extend beyond the state in which it is organized and states contiguous thereto." We express no opinion at this time as to whether Ohio Valley is entitled to such exemption, and observe that any questions relating thereto may be determined in the future, pursuant to appropriate notice under Rule U-6 or otherwise.

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stock would be owned directly by the respective parent registered holding companies. As a result, the structures of the respective registered holding company systems will each be limited to three layers of companies, and there will be no violation of the "great-grandfather clause."

Upon the signing of the definitive contract between the Atomic Energy Commission and Ohio Valley, which took place on October 15, 1952, the present application-declaration was filed with us, and on October 17, 1952, we issued our notice of filing and order for hearing giving public notice of the proposed transactions. Because of the major importance of this undertaking and its possible effect on many thousands of investors and consumers, we directed that a public hearing be held so that all pertinent facts might be explored and to permit any interested persons to appear and present evidence or argument. Pursuant to such notice, a hearing was duly held before one of our hearing officers on October 27, 1952. At the hearing, representatives of the applicant companies testified in detail concerning the proposed transactions. No representatives of interested investors or consumers appeared in opposition to the proposals. Representatives of the companies urged that we act as promptly as possible in order that Ohio Valley might immediately obtain funds to proceed with excavation and preliminary construction.

[1] We consider first the proposed acquisition of securities under the

standards of § 10 of the act, 15 USCA § 79j. The problems under § 10 are similar to those presented in connection with the project involving Electric Energy, Inc., a corporation formed for the purpose of supplying the electric energy requirements of an atomic energy plant at Paducah, Kentucky.⁴ In our opinion in that case, we summarized the applicable statutory standards as follows (Holding Company Act Release No. 10340, 88 PUR NS 28, 31):

"We may not permit an acquisition of securities under § 10 of the act if we find, inter alia, that there will be a concentration of control of public utility companies detrimental to the public interest or the interests of investors and consumers; that the consideration is not reasonable; or that the acquisition will unduly complicate the capital structure of the holding company system of the applicant. Affirmatively, we must find that the acquisition is not detrimental to the carrying out of the provisions of § 11 and that it tends toward the economical and efficient development of an integrated public utility system as defined in § 2 (a) (29) of the act."

In considering the application of these standards, we went on to state in the same opinion:

"The applicants concede that under the standards of § 10 of the act the facilities of Electric Energy 'may not in the long run be kept in the systems of all the applicant companies.' They contend, however, that these facilities

⁴ See our memorandum opinion dated January 15, 1951, approving the creation of Electric Energy, Inc., and the acquisition of its stock by five sponsoring companies (Re Central Illinois Pub. Service Co. Holding Company Act Release No. 10340, 88 PUR NS 28), and 96 PUR NS

our memorandum opinion concerning the sale of \$100,000,000 of first mortgage bonds by that company, dated June 26, 1951 (Re Electric Energy, Holding Company Act Release No. 10639).

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clearly can belong in the system of one or more of them and suggest that final determination of which companies should retain their interests in Electric Energy should be made after the impact of the defense program on their respective systems is known and after the present emergency has passed.

"From the record and our administrative knowledge of the operations of these companies, we agree that at least one and perhaps more of the applicants can meet the acquisition standards of § 10, but we do not have before us an adequate record to make conclusive statutory findings as to which of the applicants can retain their interests in accordance with the act. Considering the novel problems raised by the number and geographic location of the applicants, the proof necessary to support such a determination, if required at this time, would necessarily involve comprehensive evidence and extensive hearings. Under normal circumstances we would require such proof before acting upon an application of this character. However, we recognize that the exigencies of national defense preclude the delays inherent in making a record of that nature, and necessitate adjustment of the administrative process to permit construction of these vital facilities with the utmost dispatch."

As in the Electric Energy Case, we have concluded that, in the situation presented in the present case, it is appropriate, within the framework of the statute and our own precedents, to permit at this time the proposed acquisitions of the Ohio Valley stock, without a definitive resolution of the issues involved under § 10. For this purpose, however, we will, as in the

Electric Energy Case, so condition our order as to provide for a re-examination of the application at a more appropriate time. In connection with such re-examination, the applicants will, of course, be required to demonstrate compliance with the applicable statutory standards, upon notice given by the Commission. At such time, in the event that any of the applicants cannot make such a showing as to justify acquisition and retention of the Ohio Valley securities, the effect of our order will be to require the disposition by such applicants of their holdings in a manner deemed appropriate by the Commission. As in the Electric Energy, Inc., Case, the applicants here are willing for us to retain jurisdiction over the question of whether the acquisition and retention of such interests may be definitively approved after the conclusion of the present national emergency.

Under these circumstances, it is unnecessary for us at this time to pass finally upon the application of the statutory standards as applied to the acquisition of the Ohio Valley stock, and our order will permit the acquisitions, subject to an appropriate reservation of jurisdiction. The construction of the new facilities is highly desirable from the standpoint of the national interest. The determination of any questions as to the acquisition of the Ohio Valley stock by each of the holding company systems concerned can be made at the appropriate time in the future in the light of all applicable statutory standards.

[2] We turn next to the issuance of securities by Ohio Valley and its subsidiary, Indiana-Kentucky. No problem is presented under § 7 as to

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the issuance of common stock as such, and the issuance of proposed debt securities is not yet before us. However, although the definitive terms of the debt securities are not before us, the general program is presented, and we must therefore consider the common stock issue in the light of the contemplated capital structure of the enterprise. Although normally we could not approve a capital structure for a utility company involving such a high proportion of debt, the context of this case presents an entirely different situation. So long as the Atomic Energy Commission contract is in force, the interest and amortization requirements for the Ohio Valley debt, which is to be retired over a 25-year period, will be covered. In the event that the contract with the Atomic Energy Commission should be terminated, the sponsoring companies will be obligated, under an agreement with Ohio Valley, to acquire all available power from Ohio Valley. The effect of this arrangement is that the sponsoring companies would supply Ohio Valley with adequate funds to meet its debt requirements. Also, in the event of cancellation of the contract between Ohio Valley and the Atomic Energy Commission during the earlier years of the contract, cancellation payments would be made by the government to Ohio Valley. Under the circumstances, we feel that the capital structure is permissible and is consistent with the public interest and the interests of investors and consumers, and our order will permit the issuance of the common stock.

[3] The remaining question concerns the application of Service Corporation. At the present time the operations of Service Corporation are limited to furnishing services to American Gas and its existing subsidiaries. Service Corporation proposes to render engineering and other services to Ohio Valley and Indiana-Kentucky in connection with the construction of the generating stations and related facilities.⁵ Such services will be rendered at cost, and any amounts not directly chargeable will be allocated on an equitable basis. It is stated that the methods and bases of allocation of service charges by Service Corporation, which have been previously approved by us, will not be changed.⁶ Our order will approve the application of Service Corporation to perform the services as contemplated, subject to the reservation of jurisdiction to pass upon any questions presented under § 13 of the act, and the applicable rules thereunder, with respect to the operations of Service Corporation.

Fees and expenses of the proposed transactions have not yet been determined, and our order will reserve jurisdiction over the amounts thereof.

Certain of the transactions are subject to approval of the Public Utilities Commission of Ohio, the Public Service Commission of Indiana, the Public Service Commission of Maryland, and the Federal Power Commission. Approvals of the Ohio and Maryland Commissions have already been obtained. In accordance with our usual practice, our order will be subject to

⁵ A substantial portion of the initial engineering and construction services will be supplied by an independent firm of consulting engineers, not yet selected.

⁶ Re American Gas & E. Service Corp. (1939) 4 SEC 923.

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the requirements of Rule U-24, so that, to the extent certain of the transactions require approval of the Indiana Commission, such transactions shall not be carried out until such approval has been obtained. Nothing in this

opinion or in our order is to be construed as in any way affecting the jurisdiction of the Federal Power Commission with respect to those aspects of the transactions subject to the jurisdiction of that Commission.

WISCONSIN SUPREME COURT

Lodi Telephone Company

v.

Public Service Commission

— Wis —, 55 NW2d 379
November 5, 1952

A PPEAL from Circuit Court order affirming Commission order directing new telephone service to rural area within certificated area of two companies; affirmed.

Service, § 117 — Obligation of utilities.

1. Public utilities are required to furnish service within their undertaking to all who reasonably require it, p. 155.

Monopoly and competition, § 83 — Authorization of competing telephone service.

2. A telephone company is not deprived of any existing unqualified legal right when another company is directed to extend its lines to a rural area within the service territory of both companies, notwithstanding any loss of patronage which the first company would suffer because of the competition, p. 156.

Monopoly and competition, § 85 — Duplication of telephone lines.

3. Duplication of telephone lines in an area is not forbidden where both companies are operating in the territory and where public convenience and necessity requires such duplication of facilities, p. 156.

Service, § 51 — Commission authority — Competitive telephone extension.

4. The Commission has power to require a telephone company to render service to persons residing within its rural territory already being served by another company, even though the Commission's finding of inadequate service by the present company is based solely on the present service cost to such persons, and where, by so finding, the Commission has reversed an earlier policy, p. 156.

Monopoly and competition, § 2 — Exclusive right to serve area — Protection from competition.

5. A utility's right to serve a territory is qualified and not absolute, and the Commission may properly protect a utility against competition only so long as such protection is consistent with public convenience and necessity, p. 156.

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the issuance of common stock as such, and the issuance of proposed debt securities is not yet before us. However, although the definitive terms of the debt securities are not before us, the general program is presented, and we must therefore consider the common stock issue in the light of the contemplated capital structure of the enterprise. Although normally we could not approve a capital structure for a utility company involving such a high proportion of debt, the context of this case presents an entirely different situation. So long as the Atomic Energy Commission contract is in force, the interest and amortization requirements for the Ohio Valley debt, which is to be retired over a 25-year period, will be covered. In the event that the contract with the Atomic Energy Commission should be terminated, the sponsoring companies will be obligated, under an agreement with Ohio Valley, to acquire all available power from Ohio Valley. The effect of this arrangement is that the sponsoring companies would supply Ohio Valley with adequate funds to meet its debt requirements. Also, in the event of cancellation of the contract between Ohio Valley and the Atomic Energy Commission during the earlier years of the contract, cancellation payments would be made by the government to Ohio Valley. Under the circumstances, we feel that the capital structure is permissible and is consistent with the public interest and the interests of investors and consumers, and our order will permit the issuance of the common stock.

⁵ A substantial portion of the initial engineering and construction services will be supplied by an independent firm of consulting engineers, not yet selected.

[3] The remaining question concerns the application of Service Corporation. At the present time the operations of Service Corporation are limited to furnishing services to American Gas and its existing subsidiaries. Service Corporation proposes to render engineering and other services to Ohio Valley and Indiana-Kentucky in connection with the construction of the generating stations and related facilities.⁵ Such services will be rendered at cost, and any amounts not directly chargeable will be allocated on an equitable basis. It is stated that the methods and bases of allocation of service charges by Service Corporation, which have been previously approved by us, will not be changed.⁶ Our order will approve the application of Service Corporation to perform the services as contemplated, subject to the reservation of jurisdiction to pass upon any questions presented under § 13 of the act, and the applicable rules thereunder, with respect to the operations of Service Corporation.

Fees and expenses of the proposed transactions have not yet been determined, and our order will reserve jurisdiction over the amounts thereof.

Certain of the transactions are subject to approval of the Public Utilities Commission of Ohio, the Public Service Commission of Indiana, the Public Service Commission of Maryland, and the Federal Power Commission. Approvals of the Ohio and Maryland Commissions have already been obtained. In accordance with our usual practice, our order will be subject to

⁶ Re American Gas & E. Service Corp. (1939) 4 SEC 923.

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the requirements of Rule U-24, so that, to the extent certain of the transactions require approval of the Indiana Commission, such transactions shall not be carried out until such approval has been obtained. Nothing in this

opinion or in our order is to be construed as in any way affecting the jurisdiction of the Federal Power Commission with respect to those aspects of the transactions subject to the jurisdiction of that Commission.

WISCONSIN SUPREME COURT

Lodi Telephone Company
v.
Public Service Commission

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APPEAL from Circuit Court order affirming Commission order directing new telephone service to rural area within certificated area of two companies; affirmed.

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3. Duplication of telephone lines in an area is not forbidden where both companies are operating in the territory and where public convenience and necessity requires such duplication of facilities, p. 156.

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4. The Commission has power to require a telephone company to render service to persons residing within its rural territory already being served by another company, even though the Commission's finding of inadequate service by the present company is based solely on the present service cost to such persons, and where, by so finding, the Commission has reversed an earlier policy, p. 156.

Monopoly and competition, § 2 — Exclusive right to serve area — Protection from competition.

5. A utility's right to serve a territory is qualified and not absolute, and the Commission may properly protect a utility against competition only so long as such protection is consistent with public convenience and necessity, p. 156.

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Monopoly and competition, § 83 — Telephone companies — Factors affecting authorization of new service.

6. One factor which the Commission considers in passing on a request by subscribers for telephone service from another company also authorized to serve the area is the effect of the loss of subscribers upon the existing company's ability to render adequate service to its existing patrons, p. 156.

Appeal and review, § 80 — Parties — Competitor.

7. A telephone company which is presently rendering service to persons demanding service from another company is a proper party to proceedings before the Commission for a determination as to whether public convenience and necessity require the new service to be rendered and is a person aggrieved by a Commission decision directing the new service and as such is entitled to bring a proceeding for review, p. 157.

(BROADFOOT, J., dissents.)

On review by the circuit court of an order of the Public Service Commission entered September 14, 1951, an original order of the Commission dated April 10, 1950, was confirmed.

Upon a petition by Lodi Telephone Company seeking to set aside the order of the Public Service Commission directing the Commonwealth Telephone Company to extend service to some thirteen persons in a rural community, these proceedings are before the court.

There was an application by said individuals to the Commonwealth Telephone Company for telephone service at its Prairie du Sac, Wisconsin, exchange. The Commonwealth Telephone Company rejected said application. On April 10, 1950, the Commission entered an order directing such service to be rendered. There was a motion for rehearing, which was denied, and the Commission found and determined that reasonably adequate service to the public requires the extension of telephone service to the petitioners from the Prairie du Sac-Sauk City exchange of the Commonwealth Telephone Company. The following order was entered requir-

ing that "Commonwealth Telephone Company extend service from its Prairie du Sac-Sauk City Exchange to serve the residences of Eustace Ryan, Nick Lamberty, Howard Enge, Arthur Ryan, Phillip Bannon, Harry Bannon, John Wehler, Clarence Ryan, George Walker, Lawrence Ryan, Joseph Ryan, Warren Carncross, and Ralph Ryan located in the town of West Point, Columbia county," and that "such extension of service be completed by October 1, 1950."

The Commission found, among other things: That the Commonwealth Telephone Company, as well as the Lodi Telephone Company, holds itself out and is engaged in offering telephone service to the public in the area involved in the town of West Point, Columbia county, as well as in other parts of said town, with a portion of its plant necessary to supply such service located in said town. That the area in which the interested petitioners resided was materially affected as to its trading zone by the completion of a toll-free bridge across the Wisconsin river at Prairie du Sac, and this community became closely connected with and is now a part of

LODI TELEPH. CO. v. P. S. C.

the Prairie du Sac-Sauk City trading zone. That the social, church, and school affiliations of petitioners are now centered in or about the Prairie du Sac-Sauk City area, which is closer to their homes than is their former center of Lodi. That fire protection is supplied to this area by the Sauk City Fire Department. That the present telephone service rendered through the Lodi Telephone Company to this area is not satisfactory to petitioners for good and substantial reasons, and that the present telephone service rendered the petitioners by the Lodi Telephone Company in this particular area is not adequate. That on May 31, 1951, the Lodi Telephone Company filed a foreign exchange tariff with the Commission, which tariff was accepted for filing on June 8, 1951, but that because of the facts existing, the alternative supplied by said foreign exchange tariff did not furnish the petitioners with reasonably adequate telephone service and facilities. That reasonably adequate service to the public requires the extension of telephone service to petitioners herein from the Prairie du Sac-Sauk City exchange of the Commonwealth Telephone Company. That public convenience and necessity require that said company accordingly so extend its facilities and plant in the town of West Point, Columbia county. The Commission having concluded that it had jurisdiction under § 196.50, Stats, to issue such an order directing the Commonwealth Telephone Company to extend service from its Prairie du Sac-Sauk City exchange to the petitioners herein, it entered an order affirming a previous order issued by the Com-

mission on April 10, 1950, to that end. The circuit court confirmed. The Lodi Telephone Company appeals.

APPEARANCES: Rieser, Mathys, McNamara & Stafford, Madison, for appellant; Charles J. Ploetz, Prairie du Sac, for intervenors; Vernon Thomson, Attorney General, William E. Torkelson, Chief Counsel, and Samuel Bryan, Madison, for Public Service Commission.

FAIRCHILD, J.:

[1] The individuals who originally petitioned for the service prayed for in the proceedings before the Commission are residents in the town of West Point, and at present they are patrons of the Lodi Telephone Company. For reasons appealing to them as sufficient, they desire the benefit of service of the Commonwealth Telephone Company. The Commonwealth Company is now rendering local service in the town of West Point.

The legislature, by due enactment, has determined that the public interest requires that public utilities shall "within their undertaking, furnish their service to all who reasonably require the same." *Northern States Power Co. v. Public Service Commission* (1944) 246 Wis 215, 58 PUR NS 377, 385, 16 NW2d 790, 795. The interested individuals and the location of their residences are within the limits thus described. This places the public utility "under a legal obligation to render adequate and reasonably efficient service" to them as members of the public to whom the utility's public use and scope of operation extend, providing, of course, that they apply for such service and comply with the reasonable rules and regulations

WISCONSIN SUPREME COURT

of the public utility. 43 Am Jur 586, § 22; § 196.03(1), Stats.

The order here under review requires the Commonwealth Telephone Company to extend its line in the town of West Point, where it is operating, so as to render local telephone service to the named petitioners who, in search of such service, have appealed to the Public Service Commission. The Commonwealth Telephone Company does not question the order, nor the fact as to the service being within the scope of its undertaking, and the evidence submitted sustains the findings of the Commission, and therefore warrants the ruling made. Section 196.405, Stats.

[2, 3] The Lodi Telephone Company is appellant here and objects to the order of the Commission. It urges that it is being deprived of its property and the right to serve these same customers under its indeterminate permit. While under the Commission's order the result may be that service of several of Lodi's customers by the Commonwealth Telephone Company will occur and their patronage be lost to the Lodi Telephone Company, still the Lodi Telephone Company is not deprived of any existing unqualified legal right. Duplication of lines is not forbidden where both companies are operating in a given territory. The legislature has conferred certain regulatory powers upon the Commission in respect to regulation of an operating utility. These regulations affecting competition or duplication are based upon the existence of public convenience and necessity. The Public Service Commission is to find whether or not public convenience and necessity will be met by ordering a duplication

of facilities. A finding according to the facts of the matter may require an extension of line and plant which may permit and require the duplication of lines as well as provide against undue extension. This is all with a view of promoting the public interest. The Commission's determination, properly supported, becomes a ruling factor. *Union Co-op. Teleph. Co. v. Public Service Commission* (1931) 206 Wis 160, PUR1932B 269, 239 NW 409.

The Commission calls attention to the fact that the Commonwealth Telephone Company is not before the court opposing the orders in question. The record does not disclose that company's attitude in the matter, but it has never challenged the order by filing an application for rehearing. Section 196.405, Stats.

[4] The evidence in behalf of the individual petitioners to establish that the service rendered by the Lodi Telephone Company was inadequate only disclosed that they would have to pay a toll charge in order to make any calls into the Prairie du Sac-Sauk City area being serviced by Commonwealth. The Commission's finding, that Lodi's service to petitioners was inadequate, therefore, was based solely on the added costs to petitioners resulting from such toll charges. While by so finding the Commission may have reversed prior Commission policy, that was entirely within their province and this court should not interfere therewith.

[5, 6] As to whether the Lodi Telephone Company was in a position to demand a hearing in this matter, a matter not determined by the court below, we are of the opinion that it is a proper party to the proceedings.

LODI TELEPH. CO. v. P. S. C.

The Commission, in opposing the appearance of the Lodi Telephone Company, based its ruling upon the opinion in the case of Wisconsin Hydro Electric Co. v. Public Service Commission (1940) 234 Wis 627, 34 PUR NS 510, 291 NW 784. We are of the opinion that the facts of that case distinguish it from cases arising under circumstances such as exist in the case at bar. In the case of Wisconsin Hydro Electric Co. v. Public Service Commission, *supra*, that company, in bringing its action, relied upon the fact that several years before it had constructed a transmission line into Cumberland to serve that city's distribution system with wholesale energy. The contract between the company and the city utility expired, and the city utility refused to renew it. The city utility was one of Wisconsin Hydro Electric's customers, and it appeared that that company had built its line into the city pursuant to the contract to furnish energy and had made a considerable investment. However, the relation between Wisconsin Hydro Electric Company and the Cumberland utility was based upon a contract and did not arise under circumstances prevailing in this case, where both the Lodi Telephone Company and the Commonwealth Telephone Company are operating within a given territory under permits which place in the Public Service Commission the authority to regulate their service on the bases of public necessity and convenience. That operation both companies undertook to provide when they accepted their respective permits. Section 227.15, Stats, provides:

"Administrative decisions, which

directly affect the legal rights, duties, or privileges of any person, whether affirmative or negative in form, except the decisions of the department of taxation, the commissioner of banks, and the commissioner of savings and loan associations, shall be subject to judicial review as provided in this chapter; but if specific statutory provisions require a petition for rehearing as a condition precedent, review shall be afforded only after such petition is filed and determined."

The utility's right to serve the territory is a qualified, not an absolute, one. The Public Service Commission can properly protect a public utility against competition only as long as such protection is consistent with public necessity and convenience, and the Commission is the primary judge of when such point is reached. Many factors are to be considered in arriving at a decision, among them the effect of a loss of subscribers upon the revenues of the utility already in the field, with possible adverse effect upon the service which that utility can give to its remaining patrons. Nevertheless, such matters are questions of fact to be determined by the Public Service Commission and not to be ignored or reversed by the courts when there is evidence in support of the Commission's findings.

[7] We are of the opinion that under the circumstances here presented the Lodi Telephone Company had interests and privileges which they might properly call to the attention of the Public Service Commission when it was engaged in considering those very matters.

We hold, therefore, that the Lodi Telephone Company was a proper

WISCONSIN SUPREME COURT

party to these proceedings and a "person aggrieved" by the adverse decision of the Public Service Commission within the meaning of § 227.16, Stats, so as to be entitled to a review in the circuit court of the Commission's order. We agree with the learned trial judge, who said:

"Commonwealth was in the rural town. Lodi was in the rural town. Each had an obligation to render adequate service. If it had an indeterminate permit, its obligation was coextensive with its right."

Therefore the requirement visited upon Commonwealth Telephone Company to perform the service according to the order of the Commission was properly within the competence of the Commission.

Judgment affirmed.

BROADFOOT, J. (dissenting): Our attention has been called to no case where the Public Service Commission has made an order such as the one appealed from. Certainly the case of Northern States Power Co. v. Public Service Commission (1944) 246 Wis

215, 58 PUR NS 377, 16 NW2d 790, relied upon by the Commission, is no precedent. There is no similarity in the facts and circumstances in the two situations. Our sympathies, of course, are with the petitioners. The users of utility service should, where possible, have the service most desirable to them. However, an order such as this can only result in a duplication of service or the abandonment of valuable facilities, and this eventually must result in higher costs for the subscribers. A continuance of this procedure could result in the inevitable liquidation of many utilities, with the large companies absorbing the small. Many people may deem that desirable, but it is a policy that should be initiated by the legislature and not by an administrative order or judicial decision.

I agree with my associates that the Lodi Telephone Company has a right to be heard, but I must disagree with that part of the opinion that approves the procedure and order of the Commission.

KENTUCKY PUBLIC SERVICE COMMISSION

Monticello Electric Light Company

v.

South Kentucky Rural Electric Cooperative Corporation

Case No. 2432

December 9, 1952

COMPLAINT by electric company against co-operative proposing to serve a customer within its territory; dismissed.

MONTICELLO E. L. CO. v. SOUTH KENTUCKY R. E. COOP. CORP.

Monopoly and competition, § 50 — Electric company and co-operative — Customer preference.

The preference of an industrial customer for the service of an electric co-operative was given consideration in the determination of a complaint by an electric company against the co-operative's proposal to serve the customer, where both companies had approximately equivalent facilities and were ready, willing, and able to serve, and where the location of the industrial customer's plant was such that it could not definitely be fixed as belonging to either the company or the co-operative.

By the COMMISSION: This proceeding is a complaint filed by the Monticello Electric Light Company (hereinafter referred to as Monticello) against the South Kentucky Rural Electric Cooperative Corporation (hereinafter referred to as South Kentucky) to determine who shall serve an industrial customer.

The complainant alleges that the customer, Monticello Hardwood Flooring Company, is located in territory now served by them and that they stand ready, willing, and able, to provide the service which that customer needs; the defendant, South Kentucky, claims the territory in which the customer is located and also states that it is ready, willing, and able to provide the desired service.

This matter came on for hearing on September 9 and October 2, 1952. At the hearing the customer filed an intervening petition stating that it had entered into a contract with South Kentucky and that the primary concern in the location of the plant had been the desire to obtain South Kentucky service. The undisputed evidence discloses that the plant of the customer is located approximately 1.4 miles north of the city limits of Monticello on the east side of highway 90. Monticello has a 2,300-volt line extending along highway 90 on the west side of that highway. Some two or

three customers, one being a commercial customer the other a residential customer, are served off this line.

South Kentucky, in February, 1952, completed a 7,200-volt line along the east side of highway 90. The primary purpose of this line was to tie in the South Kentucky substation with the rest of the system north of the city of Monticello. Both of the parties to this action have substations of equal size in the immediate vicinity and the facilities of both appear to be equally capable of serving the proposed customer.

The location of this plant is such that it cannot definitely be said to be within the territory of either of the parties.

Directly across the highway from the customer's new plant are customers of both Monticello and South Kentucky. Several hundred feet further beyond the plant is a commercial customer served by South Kentucky; there are also a number of customers including two industrial customers closer to the city limits of Monticello that are served by South Kentucky. Monticello is also serving customers in the immediate vicinity.

From this it can be seen that this is territory where Monticello shades into South Kentucky and there are numerous instances where the territory appears to overlap so that a defi-

KENTUCKY PUBLIC SERVICE COMMISSION

nite dividing line delineating South Kentucky on one hand and Monticello on the other cannot be drawn with any degree of accuracy.

Counsel for Monticello cites the case of Taylor County Rural Electric Co-op. Corp. v. Kentucky Utilities Co. (Ky 1952) 94 PUR NS 14, and says this is a similar situation and asks that the Commission decide this case in favor of Monticello. It seems to us there are several important factors which are present here which were not present in the above case; the first and most important is the very strong expression of customer preference in this proceeding. The customer filed an intervening petition requesting that South Kentucky be permitted to serve them and all but one of its board of directors appeared at the hearings and testified that the availability of South Kentucky power was one of the prime considerations in the location of the plant; they further testified that had they known that South Kentucky power would be unavailable to them that a different plant site would be chosen where there would be no controversy.

This is not to say that in every case where the customer expresses a preference substantial weight would be given to that expression. In this case, however, where both companies have approximately equivalent facilities, where both companies have the ability to serve and are ready and willing to serve and where the location is such that it cannot be definitely fixed as belonging

to either one or the other, then customer preference is certainly to be given some consideration. This is in line with decisions elsewhere on similar questions.

There are other factors which distinguish this case from the Taylor County Case; one is that both parties have the ability to serve with their existing facilities. This is not true in the Taylor County Case because it would have been necessary for the complainant, Taylor County Rural Electric Cooperative Corporation, to install additional substation capacity and to construct heavier lines.

In this case the proposed load of the customer will amount to only 8 per cent of the total load of South Kentucky. In the Taylor County Case the proposed load was approximately 25 per cent of the total load of the co-operative. It was not our intention in the Taylor County Case, and we are so stated, that rural electric co-operatives should be excluded from the entire field of commercial and industrial power supply. We are of the opinion that these factors constitute more than a sufficient basis upon which to distinguish this case from the Taylor County Case.

In accordance with the foregoing the Commission finds that South Kentucky is properly entitled to serve this customer.

It is therefore *ordered* that the complaint of Monticello Electric Light Company be, and it hereby is, dismissed.

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Industrial Progress

A digest of information on new construction by privately managed utilities; similar information relating to government owned utilities; news concerning products, supplies and services offered by manufacturers; also notices of changes in personnel.



\$58,000,000 Expansion Set by Consumers Power Company

CONSUMERS POWER COMPANY will invest more than \$58,000,000 in 1953 on a record electric and gas expansion and improvement program for Michigan, President Dan E. Karn announced recently.

Mr. Karn said the 1953 construction budget is the largest in the company's history, and brings to more than \$338,000,000 the total invested since the end of World War II.

Electric facilities will require approximately \$44,000,000 of the 1953 budget, and natural gas facilities \$12,500,000.

Consumers serves a population of over 3,000,000 in a 29,000 square mile area of Michigan, and has more than 700,000 electric and 350,000 gas customers. The company expects to add 37,000 electric and gas customers in 1953.

Major electric projects include continuing construction of the company's new Justin R. Whiting electric generating plant on Lake Erie, near Monroe, where two 85,000-kilowatt generators went into production in 1952 and where a third unit, of 106,000-kw capacity, is now being installed. This plant made possible an adequate supply of electrical energy during December when the company experienced all-time high loads in its statewide territory.

Other major electric projects include the continuing construction of a seventh generating unit, of 135,000-kw capacity at the company's John C. Weadock generating plant near Bay City.

Public Service Elec. and Gas to Spend \$90,000,000 This Year

GEORGE H. BLAKE, president of Public Service Electric and Gas Company, stated that the company plans to spend approximately \$90,000,000 in 1953 for additions and improvements to electric and gas facilities. The 1953 expenditures will continue the company's unprecedented construction program under which it has spent over \$300,000,000 during the years 1946 to 1952, inclusive.

U. S. Rubber Announces New Assignments

FIVE new assignments in the electrical wire and cable department of United States Rubber Company have just been announced by Howard H. Weber, sales manager of the department, and are effective immediately.

John Blake has been made manager of state and municipal sales, and E. T. Corbus has been named manager of electrical utilities sales.

Both are located at U. S. Rubber Company's headquarters at 1230 Avenue of the Americas, New York 20. J. W. Loveland, located at the New York branch at 191 Hudson street, is now eastern division sales manager, succeeding Mr. Corbus.

C. R. Pickens will be the southeastern division sales manager, located at Atlanta, and H. J. Cluver will be the middle-Atlantic division sales manager, with headquarters at Philadelphia.

Idaho Power's '53 Construction Tops \$12 Million

IDAHO POWER COMPANY president T. E. Roach reported a 1953 construction budget of \$12,858,000 for power plant, transmission line and substation improvements.

Budget items include \$4,012,500 for power plant construction, \$2,500,400 for transmission lines, \$2,475,000 for distribution lines, \$2,170,700 for substations and \$1,700,000 for miscellaneous service facilities.

Single Tone Selective Signaling System

A DEPENDABLE, single tone selective signaling system has been developed and is being produced by Motorola, Inc., 4545 Augusta boulevard, Chicago 51, Illinois.

According to the manufacturer, the new selectivity signaling system has widespread applications in industrial, public safety, transportation, and utility communications systems.

The system has been designed for use in conjunction with any communication medium—two-way radio, land lines, microwave or power line carrier, anywhere that remote control or receiver selection is a necessity.

The function of the system is to allow any operator to initiate an operation at one or more remote points through an intervening communication medium. The operation may be the selection of a particular receiver or group of receivers from many receivers in a system, the selection of a particular relay transmitter,

(Continued on page 26)

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the illumination of a particular lamp on an indicator panel, the sounding of a particular alarm, any operation that can be remotely controlled by a relay.

Cleveland Trencher Issues Bulletin on Model 320

A 4-PAGE bulletin on the Cleveland Model 320 trencher has been published by the Cleveland Trencher Company. Performance-proved on thousands of miles of pipelines throughout the world, this Cleveland model has become an outstandingly popular pipeline trencher during the four years it has been on the market.

The folder contains many photographs presenting the 320 in action under all types of job and weather conditions. Text briefly outlines Cleveland advantages and special design features. Complete dimensions and specifications, including a table of optional cutting widths, are also contained in the 2-color folder.

Copies of the folder may be obtained by writing to the Cleveland Trencher Company, 20100 St. Clair avenue, Cleveland 17, Ohio.

Alabama Power Has Largest Program in History

DIRECTORS of the Alabama Power Company have approved a construction expenditure of more than \$39,000,000. An additional expenditure of \$63,000,000 for operating and

maintenance expenses will bring the total to be spent to \$102,000,000.

Thomas W. Martin, chairman of the board, and Lewis M. Smith, president said the construction budget for 1953 was the largest in the power company's history. Including 1953, construction expenditures during the past six years amount to over \$166,000,000.

Rust Protection Feature in New Rust-Oleum Catalog

THE RUST-OLEUM CORPORATION has just released a six-page catalog featuring Rust-Oleum rust preventive coatings for farm implements and machinery, and for construction and highway maintenance equipment.

Actual color chips are included in the new catalog to illustrate the many colors available which match colors of original equipment manufacturers. Included are specific applications, uses, and instructions for brush or spray application.

In addition, the catalog features Rust-Oleum Clear-Sele, the clear liquid finish for use in "mothballing" equipment in outdoor storage and restoring dull colors, and Rust-Oleum R-9, a temporary removable protective coating for clean metal parts.

For complete information and copies of the Rust-Oleum catalog, Form No. 215, write the Rust-Oleum Corporation, 2799 Oakton Street, Evanston, Illinois.

(Continued on page 28)

peculiar

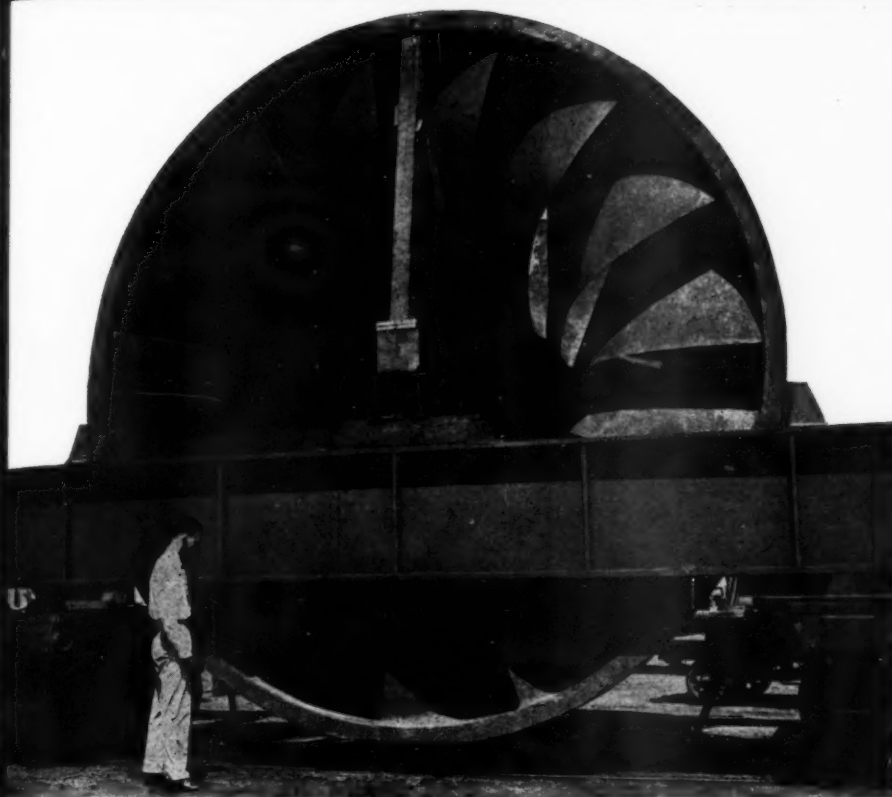
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A-C Releases Bulletin on New Magnetic Air Circuit Breaker

DESIGN and construction features of the "Ruptair" magnetic air circuit breaker arranged for installation in vertical lift switchgear rated 4.16 kv are described in a new bulletin released by Allis-Chalmers Manufacturing Company.

The bulletin diagrams how the "Ruptair" breaker interrupts short circuit current and describes the purpose of the arc chute and the efficiently integrated contacts.

The bulletin also includes a quick picture of the "Ruptair" circuit breaker installed in vertical lift, metal-clad switchgear, and a table of ratings and dimensions. The "Ruptair" magnetic air circuit breaker is described as the only vertical lift breaker with horizontal contact separation.

Copies of the bulletin "Ruptair" Magnetic Air Circuit Breaker," 18B6364B, are available

upon request from Allis-Chalmers Manufacturing Company, 965 S. 70th St., Milwaukee, Wis.

Cordage Corporation Names New Executive

FREDRIK B. PAULSEN, president of the Paulsen-Webber Cordage Corporation, New York, has announced the appointment of Esmond E. Peckham as secretary-treasurer of the corporation.

Mr. Peckham formerly was associated in executive positions with the Warsaw Elevator Company of Warsaw, N. Y., Rochester Ropes, Inc., of Culpeper, Va., and the Grinnell Corporation of Providence, R. I.

The Paulsen-Webber Cordage Corporation which manufactures wire rope and distributes twine, wire rope, and fabrications of canvas and fibre rope has branch offices in Boston, Philadelphia, Baltimore, Norfolk, New Orleans, Pittsburgh, Nashville, and Houston.

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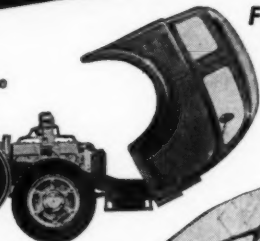
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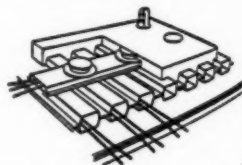


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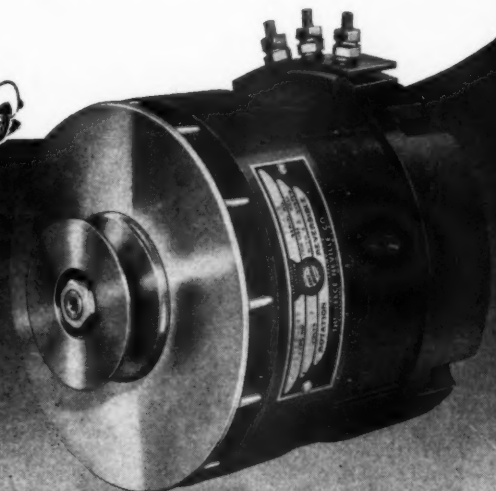
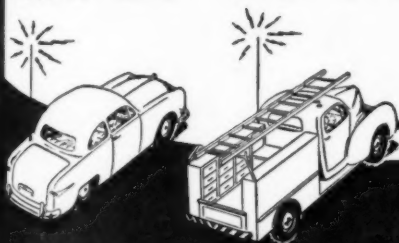
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The California Electric Power Co., Riverside
The Dayton Power and Light Co.
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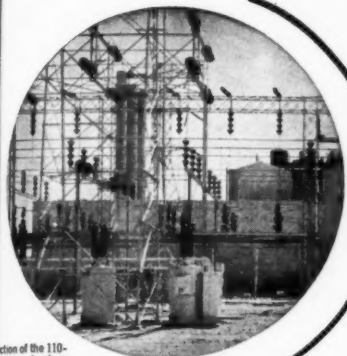
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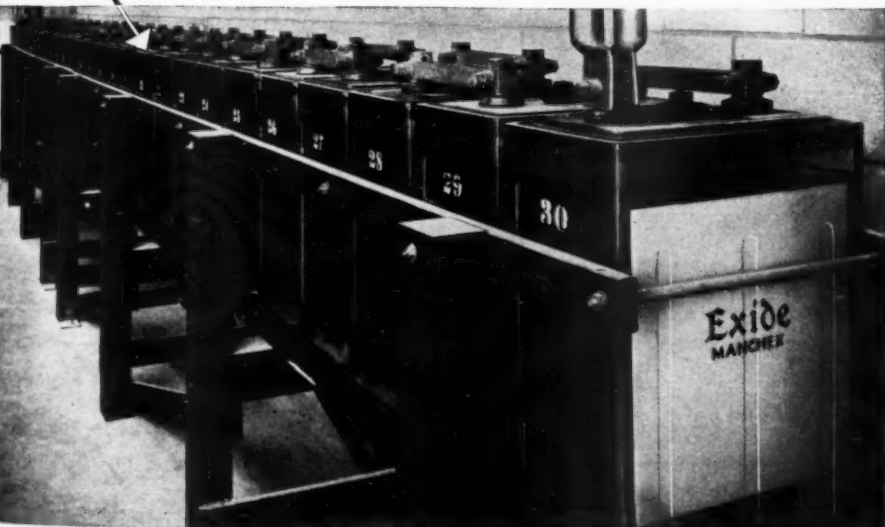
One-half of installation of 60-cell FME Exide-Manchex battery in Moss Landing plant.



Section of the 110-kV bus structure with main turbine building in background.



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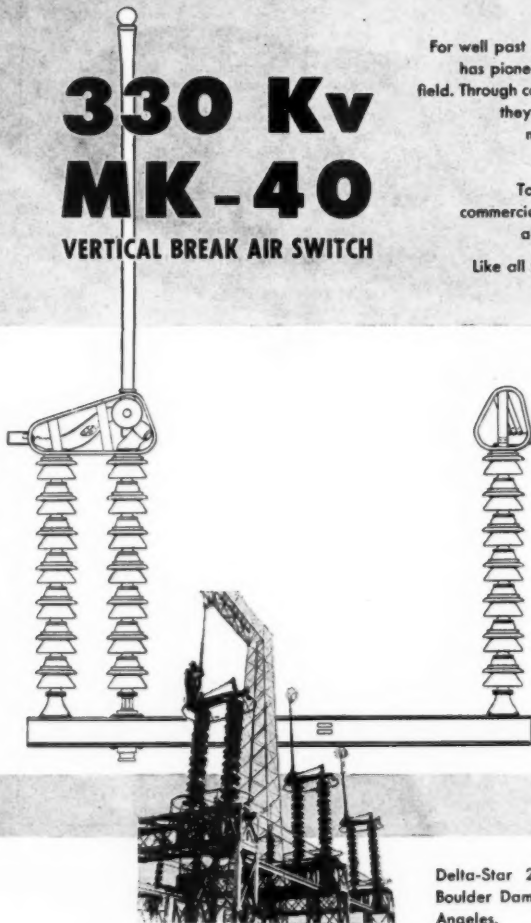
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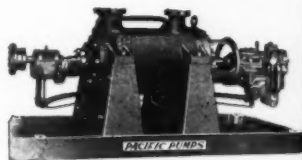
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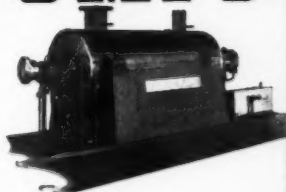


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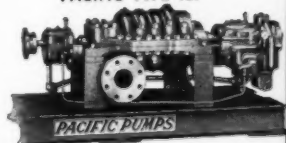


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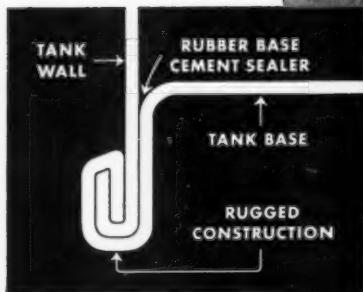


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